F.M. 1585 and Avenue L Groundwater Site Inspection Report

Lubbock, Lubbock County, Texas TXN000606862

REGION VI

Prepared in cooperation with the U.S. Environmental Protection Agency

March 2011

F.M. 1585 and Avenue L Groundwater

SITE INSPECTION REPORT

Lubbock, Lubbock County, Texas
TXN000606862

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TABLE OF CONTENTS

FIGURES

TABLES

1.0 INTRODUCTION

The U.S. Environmental Protection Agency (EPA) Region VI requested the Texas Commission on Environmental Quality (TCEQ) to conduct a Site Inspection (SI) at the F.M. 1585 and Avenue L Groundwater site. The site is a contaminated groundwater plume of unknown size, and from an unknown source in Lubbock, Lubbock County, Texas. The contaminated plume was discovered during a routine sampling of the public water supply well which serves the Country Squire Mobile Home Park. The site name does not identify the extent of the site or principal responsible parties, and the site is neither equal to nor confined by the boundaries of any specific property from which the site name is derived.

The specific goals for the SI as identified by the EPA are:

- Determine the potential threat to human health or the environment posed by the site;
- Determine the potential for a release of hazardous substances into the environment; and
- Determine the potential for placement of the site on the National Priorities List.

This SI report has been prepared according to *40 CFR Part 300, Hazard Ranking System, Final Rule*; the *Hazard Ranking System Guidance Manual*; and the *Guidance for Performing Site Inspections Under CERCLA* (Ref. 1, Ref. 2, Ref. 3). Completion of the SI included reviewing existing site information, determining regional characteristics, collecting receptor information within the site's range of influence, executing a sampling plan, and producing this report.

2.0 SITE BACKGROUND

2.1 Site Location

Site Name:	F.M. 1585 and Avenue L Groundwater
CERCLIS ID Number:	TXN000606862
Site Address:	13010 Avenue L, Lubbock, Texas
Latitude:	33.475394°
Longitude:	-101.848998°
County:	Lubbock
Congressional District:	Texas 19th
Site Owner:	Pamela Sue Hughes Phone: (806) 748-1502
Legal Representation:	N/A

2.2 Site Description

The site is a 1,2-dichlorobenzene-contaminated groundwater plume with an unknown source located in the vicinity of the intersection of F.M. 1585 and Avenue L south of Lubbock, Lubbock County, Texas (Figure 1). The indicator well is a drinking water well serving 24 individuals on 13 connections at the Country Squire Mobile Home Park (CSMHP). At the time in which contamination was discovered the well met the criteria of a public water supply (formerly, PWS #1520142), supplying 60 individuals on 19 connections. The system has recently been listed as "non-public" due to the reduction of residents as the CSMHP is being closed. There is also an out-of-service well on site that has been disconnected from the system (Ref. 4, pp. 2-4; Ref. 36, p.1).

The CSMHP property is located less than 0.25 mile west of U.S. Highway 87 and one block south of F.M. 1585 in a mixed residential and commercial area. Within 0.3 miles there are three convenience stores with gasoline dispensers, a feed store, a boiler works, two restaurants, and a variety of other commercial endeavors along F.M. 1585. A day care facility is located within 200 feet west of the CSMHP property (per the day care owner, only bottled water is consumed on premises (Ref. 28, p. 1)). The area to the north and south of F.M. 1585 is predominantly residential with the exception of lots

fronting US Highway 87, which are predominantly commercial. Cotton fields surround the area, the closest of which lies 0.25 mile west of the indicator well (Figure 3; Ref. 18, p. 2).

No city-supplied water is available to businesses or residences within 0.5 mile of the CSMHP property; therefore, there are many groundwater wells in the area (Ref. 44, p. 1; Figure 1). The Texas Water Development Board documents twelve wells within 0.25 mile of the indicator well, however, based on the number of residences, there may be as many as eighty domestic wells within this distance (Ref. 43, p. 1). Available drillers' logs indicate that all groundwater wells in the area are screened between 100 and 200 feet below ground surface (bgs) (Ref. 5, pp. 1-30). There are twelve PWS wells within 0.5 mile; however, five of those wells are not in use or are being used in a manner- and for a population- that no longer qualifies the well as a PWS at the present time (note that PWS #1520103 has returned to active status as of the time of the Site Inspection).

Of the seven active PWS wells, one supplies a mobile home park, three supply convenience store/gasoline stations along F.M. 1585 and serve transient populations, one supplies a liquor store, one supplies a restaurant, and one supplies a night club (this well was designated a PWS after the sampling event, and thus not sampled)(Table 2.1). Five of the wells lie along F.M. 1585 within 0.3 mile east of the CSMHP property; the sixth well is on the east side of the frontage of Highway 87; the seventh well lies within 0.4 mile to the south on Avenue L (Figure 3).

Table 2-1: Public Water Supply Wells within 0.5 Mile

PWS #	Name	Status	Reference
1520142	Country Squire MHP 1	Inactive	Ref. 4, pp. 2-4
1520103	Rising Star Store (now Woody's General Store)	Active	Ref. 4, pp. 5-7
1520179	Town & Country (now Stripes)	Active	Ref. 4, pp. 8-9
1520180	Taste of Mexico (out of business)	Inactive	Ref. 4, pp. 10-12
1520209	Great Scott's Barbecue (out of business)	Inactive	Ref. 4, pp. 13-14
1520222	Cooper Drive-In	Active	Ref. 4, pp. 15-17
1520229	Taylor Petroleum (Fina Station)	Active	Ref. 4, pp. 18-20
1520230	Country Livings MHP	Inactive	Ref. 4, pp. 21-22
1520248	Double T Discount Liquor	Active	Ref. 4, pp. 23-25
1520047	Western Terrace MHP	Inactive	Ref. 4, pp. 26-28
1520155	Country Squire MHP 2	Active	Ref. 4, pp. 29-31
1520263	Jaguars Gold Club Lubbock	Active	Ref. 4, pp. 32-34

The groundwater flow direction in the area is from northwest to southeast (Ref. 23, p. 1). The groundwater migration pathway is the pathway of concern for the Site Inspection since the groundwater is the primary drinking water source for the community in the vicinity of the CSMHP property. Potential receptors are residents and the transient population drinking water from wells in proximity to the site.

2.3 Site Ownership History

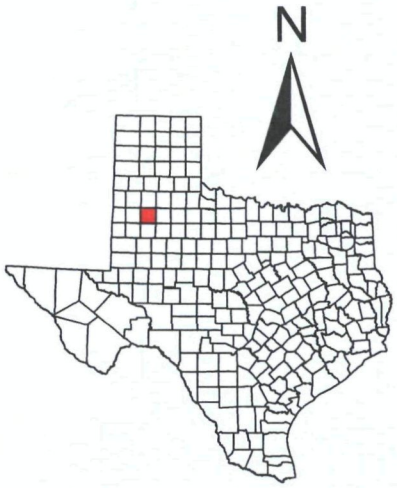
The CSMHP property was part of a larger tract of agricultural land that was ultimately subdivided. The property was being used as a mobile home park when Mr. Olan Johnson purchased it in the latter part of the 1970s. He added the second on-site well (the indicator well) in 1983 and operated the CSMHP through 2003, when he sold the property to the current owner, Pamela Hughes (Ref. 6, p. 1; Ref. 7, p. 1).

Figure 1. Site Location

TCEQ

FM 1585 and Avenue L Groundwater
Lubbock, Texas
TXN000606862

Lubbock City Limits



0 0.5 1 2 3 4 Miles

The base data set is 2008, UTM Zone 14, 0.5 meter resolution, Natural Color, NAD 1983

This map was generated by the Remediation Division of the Texas Commission on Environmental Quality. It is intended for illustrative or informational purposes only, and is not suitable for legal, engineering, or survey purposes. This map does not represent an on-the-ground survey conducted by or under the supervision of a registered professional land surveyor. In cases where property boundaries are shown, it only represents their approximate relative location. No claims are made to the accuracy or completeness of the data or to its suitability for a particular use. For more information concerning this map, contact the Remediation Division at 800-633-9363.

Figure 2. Site Features

TCEQ

FM 1585 and Avenue L
Groundwater
Lubbock, Texas
TXN000606862

Property Boundary

Indicator Well

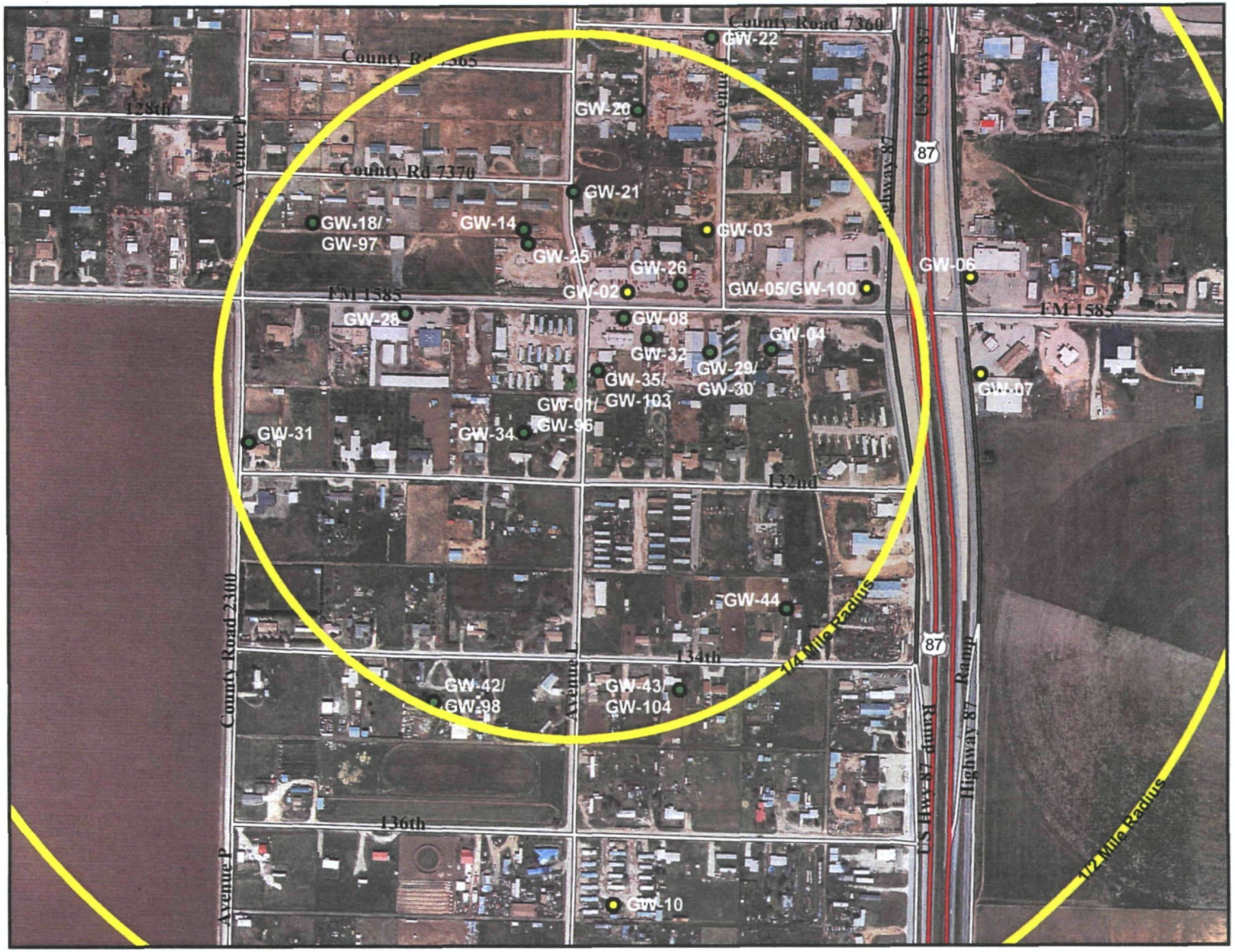
N

0 50 100 200 300 400 Feet

The base data set is 2008, UTM Zone 14, 0.5 meter resolution, Natural Color, NAD 1983

This map was generated by the Remediation Division of the Texas Commission on Environmental Quality. It is intended for illustrative or informational purposes only, and is not suitable for legal, engineering, or survey purposes. This map does not represent an on-the-ground survey conducted by or under the supervision of a registered professional land surveyor. In cases where property boundaries are shown, it only represents their approximate relative location. No claims are made to the accuracy or completeness of the data or to its suitability for a particular use. For more information concerning this map, contact the Remediation Division at 800-633-9363.

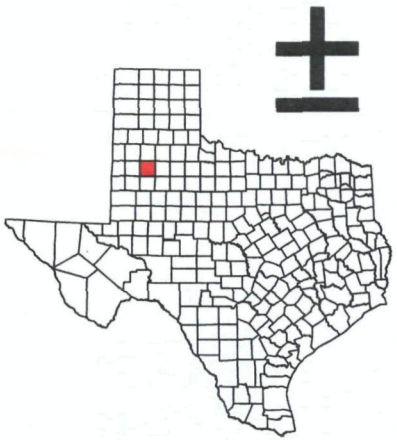
Figure 3. Groundwater Sample Locations- 1/2 Mile Radius



TCEQ

FM 1585 and Avenue L Groundwater Lubbock, Texas TXN000606862

- # Indicator Well
- Private Water Well
- Public Water Supply Well

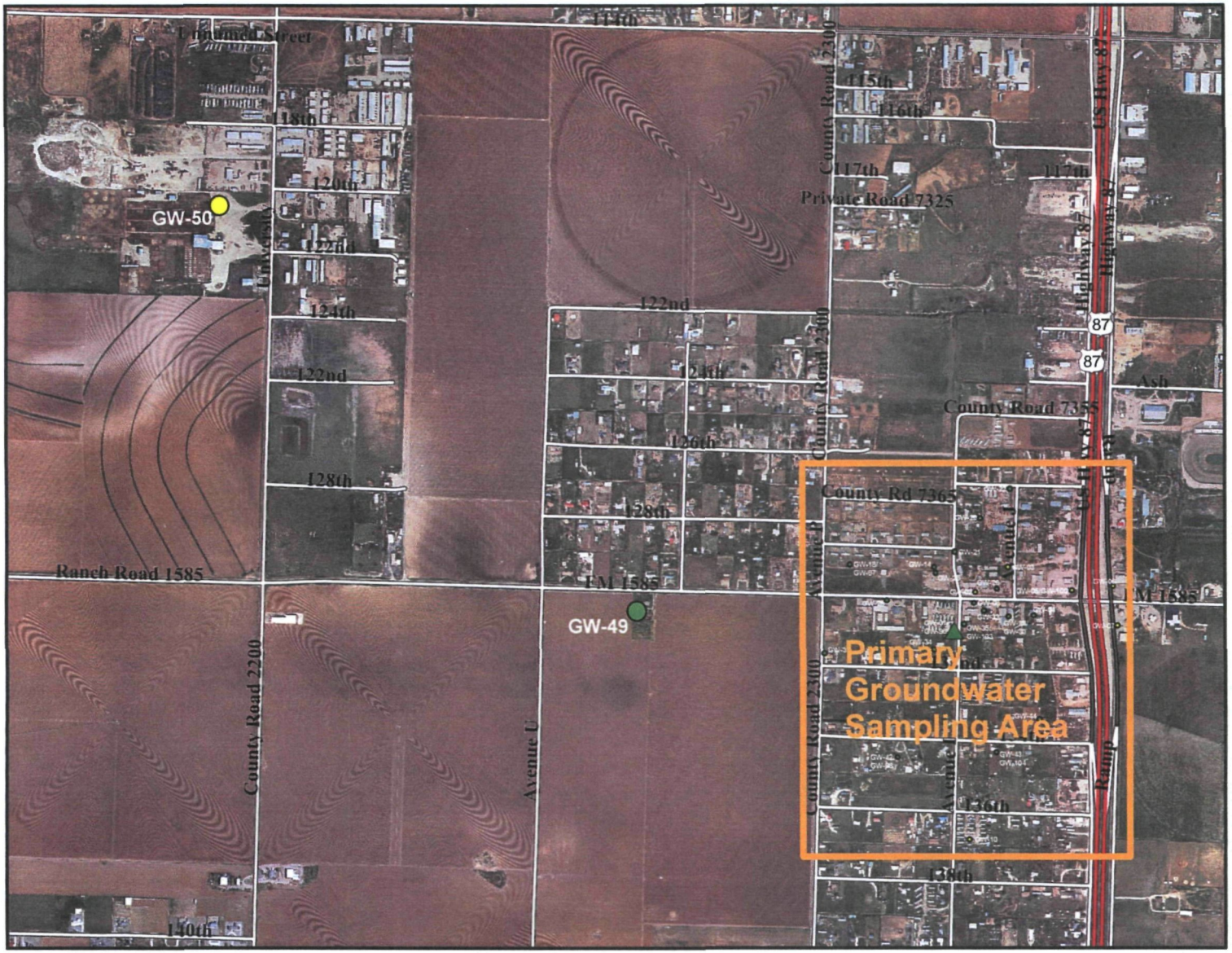


0 0.05 0.1 0.2 0.3 0.4 0.5 Miles

The base data set is 2008, UTM Zone 13, 0.5 meter resolution, Natural Color, NAD 1983

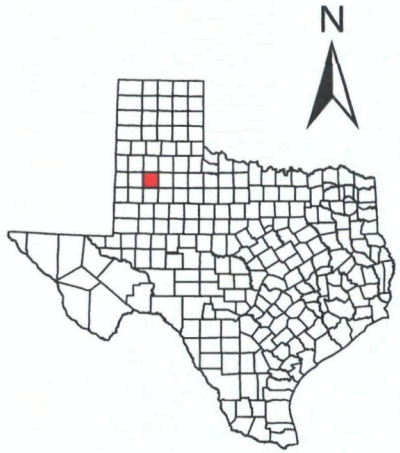
This map was generated by the Remediation Division of the Texas Commission on Environmental Quality. It is intended for illustrative or informational purposes only, and is not suitable for legal, engineering, or survey purposes. This map does not represent an on-the-ground survey conducted by or under the supervision of a registered professional land surveyor. In cases where property boundaries are shown, it only represents their approximate relative location. No claims are made to the accuracy or completeness of the data or to its suitability for a particular use. For more information concerning this map, contact the Remediation Division at 800-633-9363.

Figure 4. Background Sample Locations



FM 1585 and Avenue L Groundwater Lubbock, Texas TXN000606862

- Public Water Supply Well
- Private Water Well
- Indicator Well



0 0.125 0.25 0.5 0.75 1 1.25 1.5 Miles

The base data set is 2008, UTM Zone 14, 0.5 meter resolution, Natural Color, NAD 1983

2.4 Source Characteristics

The source of the contamination in the indicator well at the CSMHP has not been identified. The contaminant of concern, 1,2-dichlorobenzene, is a colorless organic liquid used in the production of herbicides and other agricultural chemicals (more than 50%), as a solvent for waxes, resins, wood preservatives, and paints, and as an insecticide, deodorizer, and degreaser. The federal maximum contaminant level (MCL) for 1,2-dichlorobenzene for benzene in drinking water is 600 µg/L (Ref. 8, pp. 1, 2; Ref. 9, pp. 1, 2, 4).

2.5 Previous Investigations

The first documented contamination of the CSMHP water system was fluoride and nitrates detected in the course of routine sampling in 1993 and 1998, respectively. Fluoride was detected at 5.2 mg/L, above the MCL of 5.0; detections below the MCL were documented through 2005. Nitrates were detected in at least 9 sampling events between 1998 and the present, measuring between 10.06 mg/L and 11.97 mg/L, above the MCL of 10.0 mg/L (Ref. 10, p. 5; Ref. 11 pp. 1-3). These contaminants are natural components of the geologic formations in this area and found frequently in the southern portion of the Ogallala aquifer in the Texas Panhandle. However, intensive agriculture and the consequent use of nitrate fertilizers throughout the region likely increases nitrate contamination through leaching to groundwater (Ref. 12, pp. 3-5, 8-9).

Regional agriculture is likely the source of the herbicides prometon and bromacil detected in well samples collected between June 2000 and May 2002 (Ref. 10, p. 1; Ref. 13, p. 1).

The indicator well has a history of arsenic contamination dating from 2001 (records before this date are not available), when this contaminant was detected at 9.7 µg/L, just below the MCL of 10.0 µg/L. A sampling event from 2005 had a detection of 11.4 µg/L. The indicator well draws groundwater from a region of the Ogallala aquifer in which contamination from naturally-occurring arsenic has been documented at, or slightly above the MCL (Ref. 14, pp. 1-2; Ref. 15, pp. 1-6; Ref. 40, pp. 1-6).

A sample collected from the indicator well on March 8, 2007 detected 1,2-dichlorobenzene at 1.52 µg/L, below the MCL of 600 µg/L. Follow-up samples in September 2007 and March 2009 exhibited detections at 1.45 µg/L and 0.9 µg/L, respectively (Ref. 10, p. 3).

As a result of this contamination the TCEQ Superfund Section was directed by the EPA to perform a Pre-CERCLIS Screening Assessment for the site, which was completed in February 2008 (Ref. 16). A Preliminary Assessment was completed in June 2008 (Ref. 17).

3.0 FIELD ACTIVITIES AND ANALYTICAL PROTOCOL

The Site Inspection Work Plan for F.M. 1585 and Avenue L Groundwater (i.e., "the work plan") was developed by the TCEQ and approved by the EPA prior to field sampling. The work plan describes the sampling strategy, sampling methodology, and analytical program used to investigate potential sources of hazardous substances and potential receptors, and is included in Appendix C. The work plan identified features under inspection based on information from the Preliminary Assessment of June 2008 and the December 14, 2009 site visit; interviews with site property owners and regulatory agencies; and a review of background information. Details of investigated features are listed in Table 3-1.

The SI field activities were conducted from March 22 through March 25, 2010. A total of 34 samples, including two background samples, four field duplicate samples, and three aqueous field blank samples, were collected during the F.M. 1585 and Avenue L SI. Sample types and methods of collection are described below. Lists of all samples collected for laboratory analysis are contained in Table 3-1. Photographs of sample locations are included in Appendix A.

3.1 Sampling Methodology

All field work was conducted as outlined in the work plan, the site-specific *Health and Safety Plan* (HASP), and the TCEQ/EPA-approved *Quality Assurance Project Plan (QAPP) for TCEQ Preliminary Assessment and Site Inspection Program: Federal Grant Identification Number V-96665501-0 (Document No. 200902).* All deviations from the work plan and/or QAPP were noted in the SI field notebooks during the SI field activities (Ref. 18, Ref. 19). The work plan, HASP, and QAPP are all included in Appendix C.

3.1.1 Groundwater Sampling

A total of 31 groundwater samples, including four field duplicate samples, were collected from 27 groundwater supply wells located in the vicinity of the indicator well. Three aqueous field blanks were also collected. Groundwater samples were collected from sampling taps closest to the well and prior to any treatment associated with the system. Water quality parameters including temperature, pH, and specific conductivity were measured every five minutes using a flow-through water quality meter. Samples were collected after values of the water quality parameters were stabilized within 10 percent for conductivity, ± 1° C, and ± 0.5 pH units for three consecutive readings. Samples were prepared and preserved using the methods and equipment described in the work plan and QAPP. Groundwater sample descriptions and sample locations are shown in Table 3-1. Photographs of sample locations are in Appendix A.

Table 3-1. Groundwater Sample Descriptions

Station ID [EPA Sample No.]	Sample Location	Rationale & Collection Date	References
GW-01 [F3G15]	PWS No. G1520142B located at 13010 Ave. L	Assess release of contaminants in groundwater. **(MS/MSD Sample)** 3/22/10	Ref. 18, pp. 3-4; Fig. 3; Photo 2
GW-02 [F3G16]	PWS No. G1520103A located at 1122 F.M. 1585	Assess release of contaminants in groundwater. 3/22/10	Ref. 18, pp. 7-8; Fig. 3; Photo 7
GW-03 [F3G17]	PWS No. G1520222A located at 1102 F.M. 1585	Assess release of contaminants in groundwater. 3/23/10	Ref. 18, pp. 9-11; Fig. 3; Photo 10
GW-04 [F3G18]	Private business and residence at 1005 F.M. 1585	Assess release of contaminants in groundwater. 3/23/10	Ref. 18, pp. 13-14; Fig. 3; Photo 12
GW-05 [F3G19]	PWS No. G1520229A located at 906 F.M. 1585	Assess release of contaminants in groundwater. 3/22/10	Ref. 18, pp. 4-5; Ref. 19, p. 2; Fig. 3; Photo 16
GW-06 [F3G20]	PWS No. G1520248A located at 722 F.M. 1585	Assess release of contaminants in groundwater. 3/22/10	Ref. 18, pp. 6-7; Fig. 3; Photo 18
GW-07 [F3G21]	PWS No. G1520179A located at 13001 Hwy. 87	Assess release of contaminants in groundwater. 3/22/10	Ref. 18, p. 6; Fig. 3; Photo 21
GW-08 [F3G22]	Former PWS No. G1520180A located at commercial property at 1207 F.M. 1585	Assess release of contaminants in groundwater. 3/25/10	Ref. 18, pp. 30, 32, 34-35; Ref. 19, p. 7; Fig. 3; Photo 24
GW-10 [F3G24]	PWS No. G1520155A located at 13601 136th St.	Assess release of contaminants in groundwater. 3/25/10	Ref. 18, pp. 29-30; Fig. 3; Photo 27
GW-14 [F3G28]	Private residence located at 1303 C.R. 7370	Assess release of contaminants in groundwater. 3/24/10	Ref. 18, pp. 22-23; Ref. 19, p. 6; Fig. 3; Photo 29
GW-18 [F3G32]	Private residence located at 1507 C.R. 7370	Assess release of contaminants in groundwater. 3/24/10	Ref. 18, pp. 20-21; Ref. 19, p. 5; Fig. 3; Photo 31
GW-20 [F3G34]	Private residence located at 12713 Ave. L	Assess release of contaminants in groundwater. 3/24/10	Ref. 18, p. 18; Fig. 3; Photo 33

Station ID [EPA Sample No.]	Sample Location	Rationale & Collection Date	References
GW-21 [F3G35]	Private residence located at 12915 Ave. L	Assess release of contaminants in groundwater. **(MS/MSD Sample)** 3/24/10	Ref. 18, pp. 20-22; Ref. 19, p. 5; Fig. 3; Photo 35
GW-22 [F3G36]	Commercial property located at 12702 Ave. J	Assess release of contaminants in groundwater. 3/24/10	Ref. 18, pp. 18, 24; Fig. 3; Photo 37
GW-25 [F3G39]	Commercial property located at 1306 F.M. 1585	Assess release of contaminants in groundwater. 3/23/10	Ref. 18, pp. 12-13; Fig. 3; Photo 40
GW-26 F3G40]	Mixed commercial and residential property located at 1114 F.M. 1585	Assess release of contaminants in groundwater. 3/25/10	Ref. 18, pp. 30-32; Fig. 3; Photo 43
GW-28 [F3G42]	Commercial property located at 1411 F.M. 1585	Assess release of contaminants in groundwater. 3/23/10	Ref. 18, p. 16; Fig. 3; Photo 44
GW-29 [F3G43]	Commercial property located at 1103 F.M. 1585	Assess release of contaminants in groundwater. 3/23/10	Ref. 18, pp. 8-9; Ref. 19, p. 3; Fig. 3; Photo 50
GW-30 F3G44]	Commercial property located at 1103 F.M. 1585	**Quality Assurance/Quality Control (QA/QC)**: Field duplicate of GW-29 3/23/10	Ref. 18, pp. 8-9; Ref. 19, p. 3; Fig. 3; Photo 50
GW-31 [F3G45]	Private residence located at 1524 132nd St.	Assess release of contaminants in groundwater. 3/24/10	Ref. 18, pp. 19-20; Fig. 3; Photo 52
GW-32 [F3G46]	Private residence located at 1201 F.M. 1585	Assess release of contaminants in groundwater. 3/23/10	Ref. 18, pp. 8, 10; Ref. 19, p. 3; Fig. 3; Photo 55
GW-34 [F3G48]	Private residence located at 13110 Ave. L	Assess release of contaminants in groundwater. 3/24/10	Ref. 18, p. 19; Fig. 3; Photo 60
GW-35 [F3G49]	Private residence located at 13007 Ave. L	Assess release of contaminants in groundwater. 3/24/10	Ref. 18, pp. 17-18; Fig. 3; Photo 62
GW-42 [F3G56]	Private residence located at 1409 134th St.	Assess release of contaminants in groundwater. 3/25/10	Ref. 18, pp. 27-29; Fig. 3; Photo 64
GW-43 [F3G57]	Private residence located at 1111 134th St.	Assess release of contaminants in groundwater. 3/25/10	Ref. 18, pp. 26-27; Fig. 3; Photo 66

Station ID [EPA Sample No.]	Sample Location	Rationale & Collection Date	References
GW-44 [F3G58]	Private residence located at 1010 134th St.	Assess release of contaminants in groundwater. 3/25/10	Ref. 18, pp. 57, 59, Fig. 3, Photo 69
GW-49 [F3G60]	Private residence located at 1901 F.M. 1585	Background drinking water sample to establish background concentrations. 3/25/10	Ref. 18, pp. 32-34; Fig. 4; Photo 72
GW-50 [F3G61]	PWS No. G1520242A located at a restaurant approx 1.5 miles NW of site	Background drinking water sample to establish background concentrations. 3/23/10	Ref. 18, p. 15; Fig. 4; Photo 74
GW-96 [F3G62]	Field blank by sample GW-01	**Quality Assurance/Quality Control (QA/QC):** 3/23/10	Ref. 19, p. 4; no photo available
GW-97 [F3G63]	Field blank by sample GW-18	**Quality Assurance/Quality Control (QA/QC):** 3/24/10	Ref. 18, pp. 20-21; Ref. 19, p. 5; Fig. 3; Photo 31
GW-98 [F3G64]	Field blank by sample GW-42	**Quality Assurance/Quality Control (QA/QC):** 3/25/10	Ref. 18, pp. 27-29; Fig. 3; Photo 64
GW-100 [F3G66]	PWS No. G1520229A located at 906 F.M. 1585	**Quality Assurance/Quality Control (QA/QC)**: Field duplicate of GW-05 3/22/10	Ref. 18, pp. 4-5; Ref. 19, p. 2; Fig. 3; Photo 16
GW-103 [F3G69]	Private residence located at 13007 Ave. L	**Quality Assurance/Quality Control (QA/QC)**: Field duplicate of GW-35 3/24/10	Ref. 18, pp. 17-18; Fig. 3; Photo 62
GW-104 [F3G70]	Private residence located at 1111 134th St.	**Quality Assurance/Quality Control (QA/QC)**: Field duplicate of GW-43 3/25/10	Ref. 18, pp. 26-27; Fig. 3; Photo 66

3.2 Analytical Protocol

Site Inspection samples were submitted to the EPA's Superfund Analytical Services/Contract Laboratory Program (CLP). DataChem Laboratories, Inc. in Salt Lake City, Utah, performed the following analyses:

- Volatile Organic Analytes: Thirty-four groundwater samples, including four field duplicate samples and three aqueous field blanks, were submitted. Samples were analyzed for volatile organic analytes using method CLP SOW SOM01.2 (Appendix B).

- Semivolatile Organic Analytes: Thirty-four groundwater samples, including four field duplicate samples and three aqueous field blanks, were submitted. Samples were analyzed for semi-volatile organic analytes using method CLP SOW SOM01.2 (Appendix B).

- Total Metals and Mercury (TM/Hg): Thirty-four groundwater samples, including four field duplicate samples and three aqueous field blanks, were submitted. Samples were analyzed for total metals and mercury using method SOW ILM05.4 (Appendix B).

3.3 Global Positioning System

A Trimble GeoExplorer-3 Global Positioning System (GPS) unit was used to determine latitude and longitude coordinates of the sample locations. GPS methodology is dictated by TCEQ OPP 8.12. Coordinates obtained during the SI were used to place the sample locations on Figures 3 and 4. For the sample points in which GPS information could not be gathered the project manager used professional judgement for mapping purposes (Ref. 18, pp. 3-34; Ref. 19, pp. 3-7).

3.4 Investigation-Derived Waste

No investigation-derived waste was generated in the course of this Site Inspection.

4.0 QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

4.1 Field Sampling QA/QC

Three types of QA/QC samples were collected during the SI: duplicate samples, field blanks, and matrix spike/matrix spike duplicates (MS/MSD). Duplicate samples were collected at the rate of one duplicate for every 10 samples of the same matrix, and at least one per day. All duplicate samples were collected, prepared, and preserved using the methods and equipment described in the work plan and QAPP (Appendix C), with the exception of sample GW-30. GW-101 was designated as the duplicate sample for day two; however, due to miscommunication, GW-30 was taken as the duplicate instead (Ref. 18, p. 9). Field blanks were obtained on the second, third, and fourth days; however, the field blank from day two was obtained incorrectly (Ref. 19, p. 4). One sample for every 20 samples collected was designated as the MS/MSD sample for each matrix. Triple volume was collected for aqueous samples designated as MS/MSD samples for volatile and semi-volatile organic analysis. Double volume was collected for water samples designated as MS/MSD samples for metals and mercury analysis. QA/QC samples are described in Table 3-1.

4.2 Laboratory Data and Analytical Results Review

All submitted laboratory data and analytical results were reviewed by the EPA Region 6 Environmental Services Branch: Environmental Services Assistance Team (ESAT) and the TCEQ PA/SI Program Quality Assurance Specialist. EPA's data validation reports, TCEQ's data review, and laboratory data sheets of all analytical results are included in Appendix B.

5.0 ANALYTICAL RESULTS AND BACKGROUND SAMPLES

This section describes the reporting and methods applied to analytical results presented in Section 6 (sources) of this report, and discusses background locations and sample reports.

5.1 Analytical Results Evaluation Criteria

Section 6: Potential Sources and Section 7: Migration/Exposure Pathways and Receptors (Table 7-2) lists the contaminants present at significant concentrations in wells sampled during this SI. For the purposes of this report, contaminants present at significant concentrations are those contaminants detected in release samples at a concentration greater than the sample quantitation limit (SQL)* in the release sample and:

- if the contaminant is not detected above the SQL* in the background sample(s), the concentration of the contaminant measured in the release sample is equal to or greater than the lowest background SQL*;

or

- if the contaminant is detected above the SQL* in the background sample, the concentration of the contaminant measured in the release sample is at least three times greater than the highest background concentration.

* If the SQL is not available and a CLP laboratory is used, the contract required quantitation limit (CRQL) is used as the SQL. If the SQL is not available and a non-CLP laboratory is used, the detection limit is used as the SQL.

The analytical summary table in this report (Table 7-1) only lists analytes detected at concentrations exceeding the respective SQLs in one or more of the samples. Sample analytical results were compared to Superfund Chemical Data Matrix (SCDM) benchmarks, which are environment or health-based substance concentration limits used with the Hazard Ranking System to evaluate potential National Priorities List sites.

5.2 Background Samples

Two groundwater samples were collected during the SI to be used as background samples. The background samples were of the same medium, were collected during the same SI, and were analyzed with the same analytical methods as all the other

groundwater samples. Background sample locations are described in Table 3-1, and shown in Figure 4. Photographs of background sample locations are in Appendix A and laboratory data sheets of analytical results for all samples are in Appendix B.

5.2.1 Background Groundwater Sample Locations

Background sample GW-49 was collected approximately 0.5 miles west of the indicator well. Background sample GW-50 was collected approximately 1.5 miles northwest of the indicator well. These wells, like all wells sampled during this SI, are screened in the Ogallala aquifer. The sample locations are shown in Figure 4. Photographs of sample locations are in Appendix A, photos 72 and 74.

5.2.2 Background Groundwater Sample Results

Background sample results are shown in the first two columns of the analytical results summary table in Section 7: Potential Sources (Table 7-1) for comparison against significant sample results. Laboratory data sheets of analytical results for all samples are provided in Appendix B.

6.0 POTENTIAL SOURCES

6.1 1,2-dichlorobenzene

There is no clear source for the 1,2-dichlorobenzene found in the indicator well. The chemical is often a constituent of industrial solvents (Ref. 8, p. 1). Bailey Boiler Works repairs boilers, but they perform all repairs in the field and do not use solvents (Ref. 34, p.1). There are no TCEQ-issued Industrial and Hazardous Waste permits within the SI sampling area (Ref. 35, p. 1). On December 10, 2010, a TCEQ Region 2 PWS inspector who has conducted system inspections at the CSMHP for 10 years stated that the most likely sources of solvent contamination would be either from an old garage behind the shopping center to the west of the CSMHP, or from a gas station across the street which

has recently been replaced by Lubbock Water Conditioning. He stated that the old barn in the northwest corner of the CSMHP property has not changed in appearance or function over approximately twenty years (Ref. 36, p. 1).

Research into cotton production, the only crop grown within one mile of the site, and herbicide use has revealed a link between 1,2-dichlorobenzene and diuron, an herbicide commonly used in the irrigated cotton industry (Ref. 37, p.1; Ref. 41, pp. 2-3). However, wells GW-31, GW-28, and GW-34, which lie between the cotton field and GW-1, exhibited no contamination from constituents related to herbicides.

The presence of 1,2-dichlorobenzene for three years at the CSMHP coupled with a history of unaffected wells in very near proximity to this property points to the possibility that the contamination may have originated within the property.

6.2 Metals

Arsenic, vanadium, and selenium were detected at various concentrations in 26 of the 31 groundwater samples. Scholarly research has discovered a water-bearing unit in the southern High Plains located broadly from Lubbock, to Midland, to eastern New Mexico, which contains these metals (Ref. 14, pp. 1-2; Ref. 15, pp. 1-6). The wells sampled as part of this SI lie within this geographic area, and lab results from these wells indicate that detections of metals fall within regional trends (Ref. 40, p. 1).

6.3 Trihalomethanes

Chloroform, bromodichloromethane, dibromochloromethane, and bromoform are the four individual contaminants comprising the category of trihalomethanes. These contaminants are frequently found singularly or in combination in water supplies as a byproduct of the chlorination process. Six of the seven active PWS wells sampled during this event exhibited some level of trihalomethane contamination. Although samples were taken prior to the chlorination process, none of the wells were equipped with backflow preventers. According to Jason Lindeman, a TCEQ PWS inspector in the

TCEQ Region 2 office, contamination of wells in this manner is not unusual (Ref. 20, p. 1; Photo 18). As a consequence, trihalomethanes are not evaluated since they are considered chlorination byproducts.

7.0 MIGRATION/EXPOSURE PATHWAYS AND RECEPTORS

This section describes analytical results and potential receptors. Only the groundwater pathway was evaluated for this SI. The soil exposure, air migration, and surface water pathways were not evaluated due to a lack of a documented release to these pathways.

Sample locations are described in Table 3-1, and shown in Figures 3 and 4. Photographs of sample locations are in Appendix A and laboratory data sheets of analytical results for all samples are in Appendix B.

7.1 Groundwater Migration Pathway

7.1.1 Geologic Setting

Regional Geology- The site is located on the Southern High Plains known as the Llano Estacado. Geologically, the area is located in the northern portion of the Permian Basin proximal to the Matador Arch, which divides the Permian Basin from the Palo Duro Basin to the north. Geomorphically, the Southern High Plains is bounded to the north by the Canadian River and grades into the Edwards Plateau to the south. The Caprock Escarpment bounds the Southern High Plains to the east and west (Ref. 21, pp. 1-2).

Stratigraphy – The Blackwater Draw Formation, the principal surficial deposit of most of the High Plains in Texas and eastern New Mexico, supports extensive agricultural development. The Caprock caliche [calcrete], which represents a long period of landscape stability, separates the Ogallala Formation from eolian sediments of the overlying Quaternary Blackwater Draw Formation (Ref. 22, pp. 1-3). Caliche occurs in both Ogallala Tertiary sediments and post-Ogallala Quaternary sediments and is

formed by the leaching of carbonate and silica from surface soils and the re-deposition of the dissolved mineral layers below the surface (Ref. 21, pp. 1-2).

The upper Tertiary Ogallala Formation contains the Ogallala aquifer, which is the major source of water for agricultural and domestic use on the Southern High Plains of Texas and New Mexico (Ref. 22, pp. 1-3). The Ogallala Formation unconformably overlies Permian, Triassic, Jurassic, and Cretaceous strata and consists primarily of heterogeneous sequences of coarse-grained sand and gravel in the lower part, grading upward into fine clay, silt, and sand. Gravel commonly occurs in layers in the basal section and ranges in size from boulders to pea-size gravel. In places, the Ogallala Formation contains some quartz gravel and caliche with pebbles and cobbles of quartz, quartzite, and chert being common (Ref. 21, pp. 1-2).

Precipitation - In Lubbock, Texas the average annual precipitation is 18 inches and evaporation is 80 inches per year (Ref. 23, p. 2). Approximately 80 percent of the annual precipitation falls between the beginning of March and end of August. Average annual gross lake surface evaporation is approximately 73 inches (Ref. 22, pp. 2-3).

7.1.2 Aquifer System

Aquifer Name and Hydrogeology - The major groundwater unit under the Southern High Plains is contained within the Ogallala Formation and is referred to as the Ogallala aquifer (Ref. 23, pp. 1-3). The Ogallala aquifer is unconfined, with water being principally stored in the pore space between clastic sediments. Typically, the groundwater contains total dissolved solid values ranging from 300 to 1,000 mg/L (Ref. 26, p. 3).

Depth and Thickness of Aquifer - At the site location, the drinking water wells in the Ogallala aquifer are typically screened between 130 to 170 feet below the ground surface, and are typically 150 to 190 feet from the ground surface to the bottom of the well (Ref. 5, pp. 1-30). The saturated thickness of the Ogallala Formation ranges from a few feet to more than 525 feet. In general, the areas of greatest saturated thickness occur in the northern plains reaching as far north as North Dakota. In the South Plains,

between Lubbock and Midland, the saturated zones vary from less than 50 feet to 200 feet. Depth to water below the land surface can range from almost 400 feet in parts of the North Plains to between 100 to 200 feet throughout much of the South Plains (Ref. 26, p. 2).

Recharge to the Ogallala aquifer is generally limited to infiltration of rainwater and is slow due to the combination of low rainfall, low infiltration rates, and high evaporation. The average recharge rate to the Ogallala aquifer ranges from 0 to 1.6 inches per year (Ref. 27, pp. 1-17).

Direction of Groundwater Flow - The water table elevation of the Ogallala aquifer approximately parallels regional land surface and the general groundwater flow direction is from the northwest to the southeast. The mean regional gradient is approximately 15-feet per mile and the typical groundwater velocity averages 7-inches per day. The groundwater flow direction and gradient may be strongly influenced by the presence of playa lakes and draws that can serve as recharge points (Ref. 26, pp. 1-5; Ref. 27, pp. 1-21). Water in the aquifer on the Southern High Plains flows from northwest to southeast at about 150 feet per year under natural conditions (Ref. 23, p. 1).

Recharge of Aquifer - The primary recharge of the Ogallala aquifer on the Southern High Plains occurs primarily through the percolation of precipitation through the soil from playas and from the underlying Dockum Formation beneath the Ogallala. It is generally recognized that playa lakes are the primary points of most natural recharge (Ref. 23, p. 2). Within a 4 mile radius of the site, it is estimated from the aerial photographs that 22 playa lakes are present, although this number may have declined due to ongoing development (Ref. 24, p. 1). The nearest surface water to the site is the Yellow House Draw which is approximately 5.8 miles northeast of the site (Ref. 24, p. 2).

7.1.3 Drinking Water Targets

Drinking Water Uses – The city limits of Lubbock lie 1.5 miles north and 2 miles west of the indicator well. Drinking water within the city limits is supplied by the City of Lubbock; all drinking water outside of the city limits and within 4 miles of the CSMHP is supplied by privately-owned drinking water wells. There are multiple mobile home parks which are supplied by a single well; all houses have their own dedicated wells. The Lubbock Cooper ISD campus, located approximately 2 miles south of the indicator well, has a City of Lubbock water line feed (installed parallel to Highway 87) which supplies all drinking water for the schools. The wells on the school grounds are now dedicated to irrigation (Ref. 18, pp. 14-15). The Lil' Haden's day care center, located approximately 200 feet west of the CSMHP property, supplies bottled water for all children and employees (Ref. 28, p. 1).

Population Average - The population density of the area is approximately 270 persons per square mile (Ref. 29, p. 2).

Well Usage - Groundwater from the Ogallala is used for irrigation of food and forage crops, and for drinking water. Ogallala water used for irrigating crops continues to increase in the region. The majority of wells in the area are privately-owned drinking water wells (Ref. 23, pp. 1-3; Ref. 5, pp. 1-30).

Wellhead Protection Area - This site is not in a wellhead protection area (Ref. 38, p. 1).

Drinking Water Sources - Residents outside the city limits of Lubbock rely upon the Ogallala aquifer for their primary drinking water supply (Ref. 5, pp. 1-30).

7.1.4 Sample Results

The indicator well showed a 1,2-dichlorobenzene detection of 0.75 µg/L, below the MCL of 600 µg/L, and the lowest detection since it was first discovered in 2007. All other wells sampled as part of this SI were non-detect for this chemical (Appendix B; Ref. 10, p. 3).

Arsenic was detected above the MCL of 10 µg/L in 26 of the 31 samples as part of this SI. Detections ranged from just above the MCL to 48.4 µg/L. It is possible that arsenic was very near the MCL in those wells that did not report exceedences, but because the Contract Required Quantitation Limit (CRQL) and the MCL for arsenic are both 10.0 any detection below that number is listed by the lab as an estimated value (Appendix B).

Vanadium was detected above the Texas Risk Reduction Program protective concentration level (PCL) of 1.7 µg/L for the groundwater ingestion pathway in 21 of the 31 samples. Detections ranged from just above the CRQL of 50.0 µg/L to 148.0 µg/L. The lab methodology may not reliably quantify levels of vanadium between the PCL and CRQL, thus it is possible that more of the wells are above the PCL (Appendix B).

Selenium was detected in five of the 31 samples, two of which were above the MCL of 50.0 µg/L. The highest detection was 84.9 µg/L (Appendix B).

Benzene was detected at 34.0 µg/L in sample GW-100 (duplicate of GW-05), above the MCL of 5 µg/L, in PWS No. G1520229. This well supplies water to the FINA gas station, which is listed as leaking petroleum storage tank (LPST) no. 109128, thus contamination was previously known and is currently being addressed at this site under the Petroleum Storage Tank/Dry Cleaner Remediation Program Section of the TCEQ. Benzene was first discovered in the well in a sample from November 9, 2006, but at a concentration of 2.15 µg/L. Successive results from samples obtained by the TCEQ Public Water Supply Section remained below the MCL until the March 2010 Site

Inspection (Ref. 30, pp. 1-9; Ref. 31, p. 1). A reverse osmosis filter system was previously installed at the site in April 2009 at the behest of a Region 2 PWS inspector, and is currently in use (Ref. 39, p. 1). The Public Water Supply Section of the TCEQ will continue to monitor contamination of the on-site well.

Trihalomethanes (THMs) were detected in five of the six PWS wells sampled during this event; only one sample from a non-PWS well showed such a detection (bromoform at 0.93 µg/L in duplicate sample GW-104). Samples from wells treated with chlorine frequently exhibit some level of THMs. PWS No. 1520222 showed the highest detection at 88.3 µg/L, slightly above the maximum allowable level of 80 µg/L established by the EPA. All other PWS detections were below 80 µg/L, and the indicator well was the sole PWS well that showed no THM contamination (Appendix B). Given the distribution of this contaminant and the known connection between THM and chlorination of drinking water, there is no link between contamination in the indicator well and that found in the public water supply systems nearby (Ref. 20, p. 1). The TCEQ Public Water Supply Section will continue to monitor THM contamination in the affected wells (Ref. 45, p. 1).

Cyclohexane, 2-hexanone, and 2-butanone were detected in a number of samples. Sample GW-05 and it's duplicate, GW-100, showed consistent, low-level detections of cyclohexane and 2-hexanone. This may be attributable, in part, to the contamination related to the LPST on site. Sample GW-06 showed detections of 2-hexanone and 2-butanone, and 2-hexanone was detected in GW-07. These four samples were taken within two hours and within 500 feet of each other, so there may have been ambient contamination of the samples from the same source; however, there is no clear explanation for the detections at these sample locations. No other well sampled showed detections of these compounds (Appendix B).

Acetone was detected in samples GW-05, duplicate sample GW-100, and field blank samples GW-97 and GW-98 (Appendix B). Because the field blank samples were obtained two and three days, respectively, after samples GW-05 and GW-100, and were obtained at locations over 0.5 mile distant, it is likely that lab contamination is the source of acetone in these samples (Ref. 42, p. 3).

Table 7-1. Volatile Organic Analytical Results (µg/L)

Analyte	GW-49*	GW-50*	GW-01	GW-03	GW-05	GW-100	GW-06	GW-07	GW-10	GW-104
1,2-Dichlorobenzene	U	U	0.75	U	U	U	U	U	U	U
Benzene	U	U	U	U	**32**	**34**	U	U	U	U
Toluene	U	U	U	U	**2.0**	**2.3**	U	U	U	U
Ethylbenzene	U	U	U	U	**1.4**	**1.6**	U	U	U	U
o-xylene	U	U	U	U	**1.4**	**1.6**	U	U	U	U
m,p-xylene	U	U	U	U	**8.6**	**9.6**	U	U	U	U
Acetone	U	U	U	U	**8.0**	**9.5**	U	U	U	U
2-Hexanone	U	U	U	U	**11 J**	**10 J**	**18 J**	**9.4**	U	U
Cyclohexane	U	U	U	U	**0.97**	**1.1**	U	U	U	U
2-Butanone	U	U	U	U	U	U	**7.3**	U	U	U
Chloroform	U	U	U	**5.3 J**	U	U	**1.4**	U	U	U
Bromodichloro methane	U	U	U	**18 J**	**2.9**	**3.6**	**1.9**	U	U	U
Dibromochloro methane	U	U	U	**23**	**13**	**14**	**8.3**	**1.8 J**	U	U
Bromoform	U	U	U	**42**	**32**	**33**	**29**	**38**	**14**	**0.93**

Bold indicates significantly above background level
* Background samples
U Undetected
J Result is estimated

Drinking Water Receptors

State well records indicate 478 domestic wells, 61 irrigation wells, and two industrial wells are within the 4-mile target distance limit (TDL) of the site (Ref. 33, pp. 1-17). Table 7-2 lists the active PWS systems with ground water wells within the 4-mile TDL (Ref. 4, pp. 1-74). There is an average of 2.52 persons per household in Lubbock County (Ref. 29, p. 1).

Table 7-2: Public Water Supplies within the 4-Mile TDL

PWS ID #	Public Water Supply Name	PWS Class	Population Count	Distance from CSMHP
1520142	Country Squire MHP 1	Residential	24	0-¼
1520155	Country Squire MHP 2	Residential	75	0-¼
1520122	Lubbock-Cooper ISD	Non-transient	3000*	1-2
1520064	Jackson Mobile Estates	Residential	61	1-2
1520036	Green MHP	Residential	50	1-2
1520067	114th St. MHP	Residential	73	1-2
1520147	Short Road Water Supply	Non-transient	1000	1-2
1520009	Big Q Mobile Home Estates	Residential	67	2-3
1520149	Whorton MHP	Residential	60	2-3
1520192	Terrells MHP	Residential	50	3-4

*All wells associated with this school are dedicated to campus irrigation.

7.2 Surface Water Migration Pathway

Due to the lack of an identified source, the surface water pathway was not evaluated.

7.3 Soil Exposure Pathway

Due to the lack of an identified source, the soil exposure pathway was not evaluated.

7.4 Air Migration Pathway

Due to the lack of an identified source, the air migration pathway was not evaluated.

8.0 SUMMARY AND CONCLUSIONS

The F.M. 1585 and Avenue L Groundwater SI field activities were conducted from March 22, 2010 through March 25, 2010. The site is designated as a 1,2-dichlorobenzene-contaminated groundwater plume originating from an unknown source. The groundwater pathway is the pathway of concern for the SI. A total of 34 groundwater samples, including two background samples, four field duplicate samples, and three aqueous field blanks, were collected from public water supply wells and residential drinking water wells within the 4-mile target distance limit of the site. All groundwater samples, except for field blanks, were sampled and analyzed for volatile organic compounds, semi-volatile organic compounds, and metals.

8.1 Potential Sources

Potential sources of 1,2-dichlorobenzene may include herbicides associated with cotton production, or chemicals spilled or leaking from a nearby shed or former garage. Laboratory results from wells between potential sources and the indicator well were all non-detect for 1,2-dichlorobenzene, therefore no clear link to a source can be drawn.

8.2 Receptors

Receptors for the contamination found in the indicator well include the population served by the public and private wells within the 4-mile target distance limit. Within 0.25 mile there may be more than 80 domestic wells in use. Within the 4-mile target distance limit there are 23 public water supply wells and at least 478 domestic wells serving approximately 13,500 residents (Ref. 33, pp. 1-17; Ref. 29, p. 2).

8.3 Conclusions

On March 8, 2007, a sample collected from the CSMHP water supply well detected 1,2-dichlorobenzene at 1.52 µg/L, below the MCL of 600 µg/L. Successive sampling witnessed a steady decline in concentrations, first to 1.45 µg/L, then to 0.9 µg/L, and

finally to 0.75 µg/L in the March 2010 SI sampling. Further, this constituent was not detected in any of the surrounding domestic or public supply wells.

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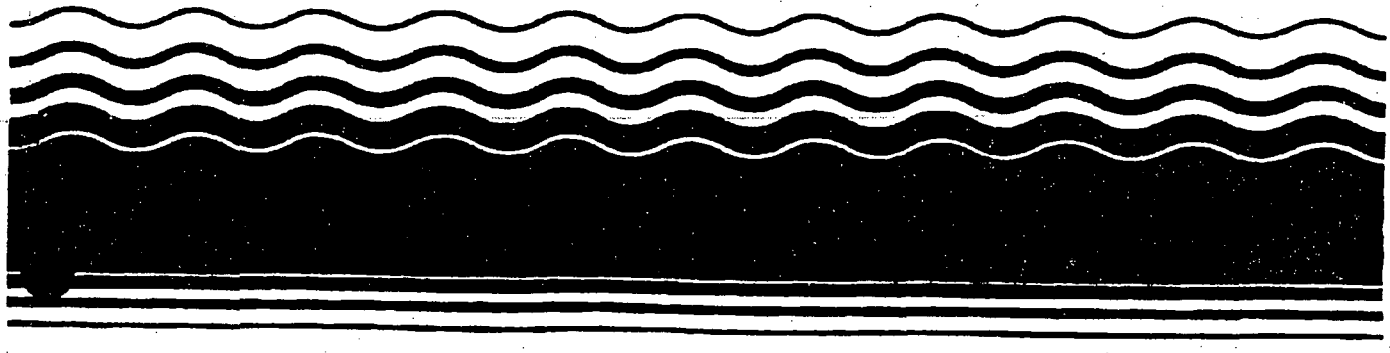
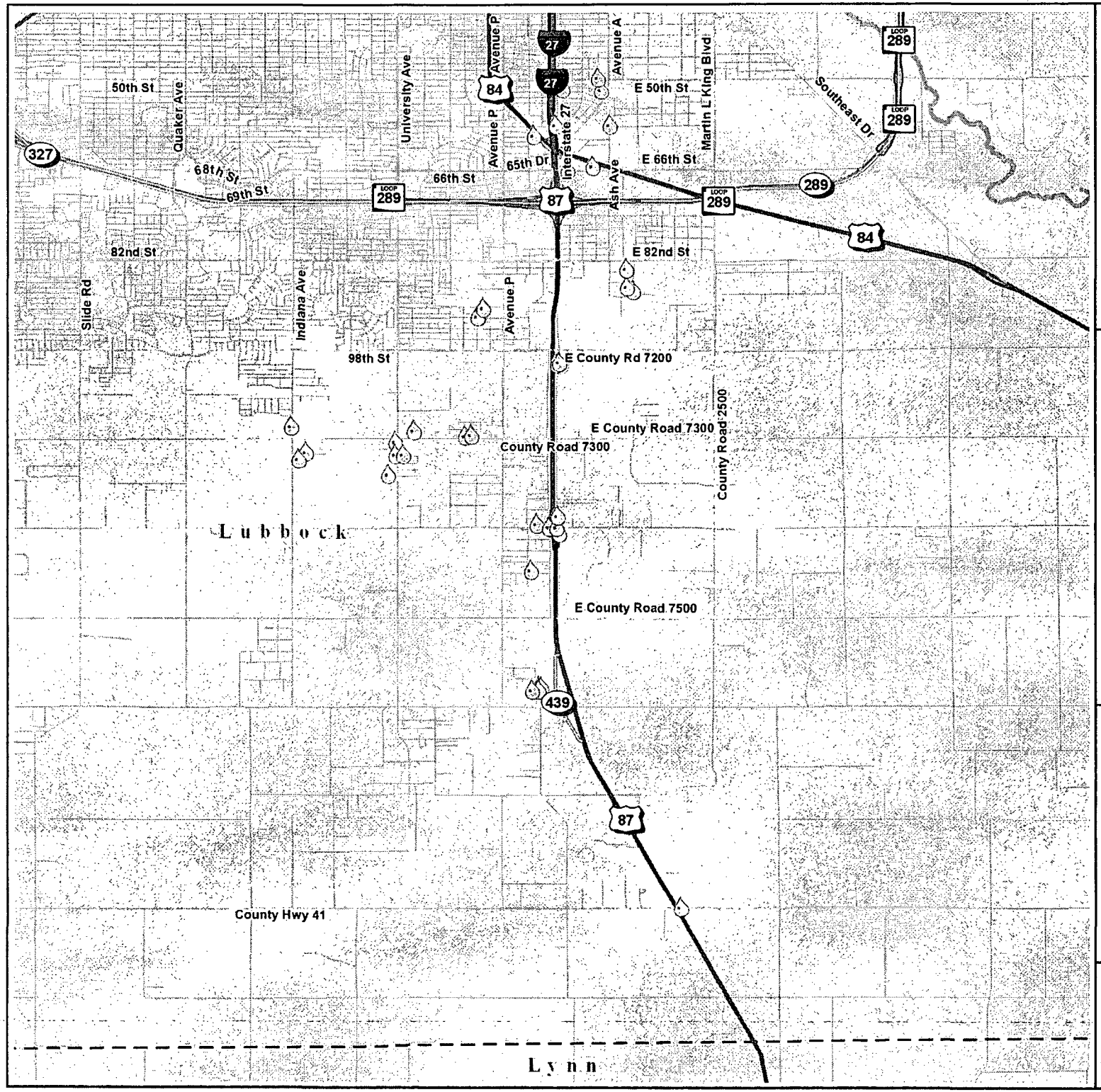


REFERENCE 4



Protecting Texas by Reducing and Preventing Pollution

TCEQ

04 01

Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087
For more information
concerning this map, please contact the
Water Supply Division at (512) 239-4691.

09/21/2010

PWS Wells- 4 Mile Radius

0 0.5 1 1.5 2 Miles

Legend

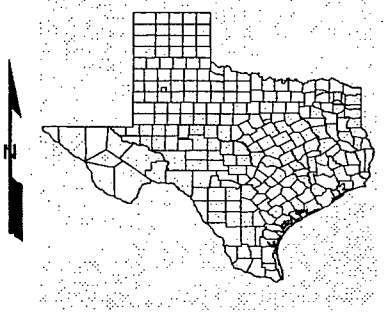
- Ground Water Well
- Surface Water Intake

Surface Water

- Truncated Watershed Boundary
- Area of Primary Influence (API)

Ground Water Capture Zone Travel Times (Years)

- 50 to 100
- 20 to 50
- 10 to 20
- 5 to 10
- 2 to 5
- 0 to 2



Public Water Systems Details/Data Sheet for COUNTRY SQUIRE MHP 1 (1520142)

Affiliations | Comments | Samples | Schedules | Fee | Site Visits | Documents
Violations | Sources | Sold Source | Entry Points | Plants

Responsible Party

Address: **13010 AVENUE L**
LUBBOCK, TX 79423-5934
Individual: **PAMELA SUE HUGHES**
Job Title: **OWNER** Phone: **(806) 748-1502**

Occurences were successfully retrieved.

Customers

Reference Number	Name	Role
CN602420820	HUGHES, PAMELA SUE	OWNER OPERATOR

Properties

CR Regulated Entity Number: **RN102677028**
CCEDS Status: **ACTIVE NOE EXISTS**
Ownership Type: **PRIVATE**
System Type: **COMMUNITY**
County: **LUBBOCK (152)**
Region: **LUBBOCK (2)**
All Monitoring Class: **GROUNDWATER**
Owned Monitoring Class: **GROUNDWATER**
Out of Season:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Customer Groups

Class	Category	Population Count	Connection Count	Meter Count
RESIDENTIAL	MOBILE HOME PARK	24	13	1

Occurrences retrieved.

Capacity

Total Storage:

Total Storage: **0.000 MG**
0.000 MG

04 02

Elevated Storage:

Pressure Tank Capacity: **0.00100 MG**

Production:

Total Production: **0.057 MGD**

Max Purchased Capacity: **0.000 MGD**

Emergency Production: **0.000 MGD**

Total Service Capacity: **0.000 MGD**

Service Pump Capacity: **0.000 MGD**

Emergency Service Capacity: **0.000 MGD**

Consumption:

Avg Daily Consumption: **0.000 MGD**

Max Daily Consumption: **0.000 MGD**

Activity

Activity Date: **06/14/2010**

Activity Status: **PROPOSED**

Operator Grades

Grade	Total
WATER GRADE D	1

Occurrences retrieved.

Site Visits

Survey Date	Visit Type	Deficiency Score	Inspector
03/03/2000	SURVEY	20	MALCOLM LAING
03/07/2001	SURVEY	0	MALCOLM LAING
02/04/2004	SURVEY	11	LANCE OWENS
05/16/2005	SURVEY	0	LANCE OWENS
04/26/2007	SURVEY	0	LANCE OWENS
05/20/2010	MD05/09/2007,RD05/22/2007 FOCUS	0	MALCOLM LAING

Site Visit occurrences retrieved.

Comments

Comment Date	Text	Staff Name
06/14/2010	PROPOSED;FOD;FOCUS: Investigation conducted by Malcolm Laing on 5/20/2010 found that the system no longer meets the definition of a PWS. Water is supplied by one well which pumps through two pressure tanks than to the distribution system. Hypochlorination disinfection is provided ahead of the pressure tanks. A second well is present but airgapped from the system. This is a community system that has 13 connections, 1 meter and serves a population of 24. An actual house to house count was conducted by the investigator who found the population to currently be 24, with 4 scheduled to move out. Update activity status from ACTIVE to PROPOSED since there are empty lots and system has potential of growth. The population changed from 60 to 24, number of connections from 19 to 13. Prepared activity	THERESA CISNEROS

04 03

	checklist.	
03/29/2010	RETURNMAIL:FTR/NOV,Y,LD05/11/2010,RD06/25/2010,UCLMD. This system is now proposed RETURNMAIL:PN/NOV,Y,LD02/05/2010,RD03/26/2010,UCLMD REMAIL:FTR/NOV and PN/NOV and DLNOVQ209,N,12/08/09 RETURN MAIL:FTR/NOV,Y,LD10/23/09,RD12/04/09,UCLMD RETURN MAIL:PN/NOV,Y,LD10/29/09,RD12/04/09,UCLMD RETURN MAIL:DLNOVQ209,Y,LD10/01/09,RD11/20/09,UCLMD. REMAIL:NO3/NOV,N,10/12/2009	MIA GONZALES
12/08/2009	REMAIL:FTR/NOV,N,09/04/2009 RETURN MAIL:FTR/NOV,Y,LD07/27/2009,RD08/25/2009,UCLMD. RETURN MAIL:PN/NOV,Y,LD07/14/2009,RD08/20/2009,UCLMD. REMAIL:DLQOR4/NOV,N,06/12/2009 RETURN MAIL:NO3/NOV,Y,LD04/30/2009,RD05/29/2009,UCLMD. AFFIL research not complete. RETURN MAIL:DLQOR4/NOV,Y,LD003/27/2009,RD04/30/2009,UCLMD. AFFIL research not complete.	MIA GONZALES
06/28/2007	Per CCI/Lubbock CAD, Pamela Hughes is the RP/OWNER of this system. I added begin/end dates & notified CR. Verified mailing in USPS. ~DCourtney	MARIE KNIPFER
09/27/2006	Apparently, this system has had a sand filter on well 1 and was not included in the treatment train. The sampler, Norris Wuenche, reports that the sand filter is broken and will not repair. Also, the well#1 (A) EP001 was air-gapped in past inspections but piping has been put together again but supposedly no electricity. Samples collected in 2006 under the EP001 are really EP002 well#2 water. There is an EP002 sampling faucet about 20 feet from the well#2 chlorinator that is ok. Another sample faucet for EP001? is in a hole and not appropriate. Future sampling will continue at EP002 unless discovered that EP001 is really operating.	MARIE KNIPFER
07/12/2002	NEW OWNER PAM HUGHES.	LANCE OWENS

Occurrences retrieved.

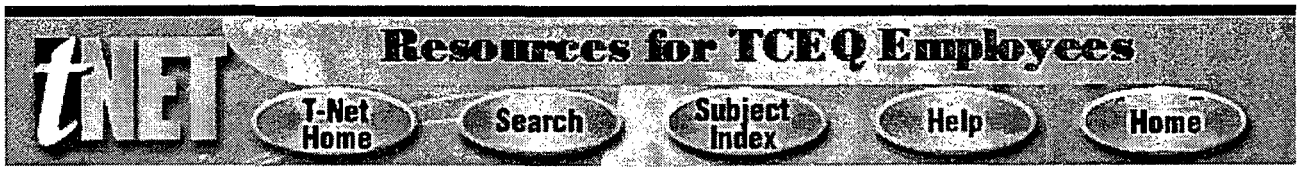
Run Water System Data Sheet Report

Occurrences retrieved.

For questions or comments regarding information on this page, contact the TCEQ iWUD Web Manager

Version V2.2.8

04 04



Public Water Systems Details/Data Sheet for RISING STAR STORE (1520103)

Affiliations Comments Samples Schedules Fee Site Visits Documents
Violations Sources Sold Source Entry Points Plants

Responsible Party

Address: **PO BOX 53777**
LUBBOCK, TX 79453-3777
Individual: **MIKE KING**
Job Title: **CO OWNER** Phone: **(806) 748-1585**
Address: **2825 61ST ST**
LUBBOCK, TX 79413-5651
Individual: **JIMMIE UPCHURCH**
Job Title: **CO OWNER** Phone: **(806) 797-5105**

Occurences were successfully retrieved.

Customers

Reference Number	Name	Role
CN603428665	JONES, DIANE	RESPONSIBLE PARTY

Properties

CR Regulated Entity Number: **RN102321874**
CCEDS Status: **ACTIVE NOE EXISTS**
Ownership Type: **PRIVATE**
System Type: **TRANSIENT/NON-COMMUNITY**
County: **LUBBOCK (152)**
Region: **LUBBOCK (2)**
All Monitoring Class: **GROUNDWATER**
Owned Monitoring Class: **GROUNDWATER**
Out of Season:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Customer Groups

Class	Category	Population Count	Connection Count	Meter Count
TRANSIENT	RESTAURANT	60	1	1

No occurrences retrieved.

04 05

Capacity

Total Storage:

Total Storage: **0.000 MG**

Elevated Storage: **0.000 MG**

Pressure Tank Capacity: **0.00030 MG**

Production:

Total Production: **0.029 MGD**

Max Purchased Capacity: **0.000 MGD**

Emergency Production: **0.000 MGD**

Total Service Capacity: **0.000 MGD**

Service Pump Capacity: **0.000 MGD**

Emergency Service Capacity: **0.000 MGD**

Consumption:

Avg Daily Consumption: **0.000 MGD**

Max Daily Consumption: **0.000 MGD**

Activity

Start Date: **03/11/1999**

End Date: **03/04/2009**

Activity Date: **03/06/2009**

Activity Status: **INACTIVE**

Site Visits

Survey Date	Visit Type	Deficiency Score	Inspector
03/11/1999	SURVEY	15	LANCE OWENS
03/15/2001	SURVEY	0	KRISTA PERCIVAL
12/10/2004	SURVEY	5	LANCE OWENS
03/04/2009	FOCUS	0	MALCOLM LAING
03/06/2009	MD03/04/2009,RD03/06/2009 EVAL-ACT	0	THERESA CISNEROS

Site Visit occurrences retrieved.

Comments

Comment Date	Text	Staff Name
05/20/2009	PHS FEE FY09 - return mail - credit fee per inactivation. Prepared credit memo.	THERESA CISNEROS
04/01/2009	RETURN MAIL:TCR/NOV,N,LD03/09/2009,RD04/01/2009,Not at this address. See comments 03/06/09 says system is INACTIVE.	MIA GONZALES
03/06/2009	INACTIVATION per Focus investigation conducted on 3/4/09 found that system is closed and boarded up. Update WUD, prepared status change checklist. Research Lubbock CAD found that 1122 fm 1585 current owner is King, Michael C (OO162012)----tcisneros	THERESA CISNEROS
02/26/2009	Sally Paramo received a phone call from Trina 806-744-5170 who indicated she was the operator for this system from May thru Nov 2008. There was a court order shutting the system down in Dec 2008 and when Trina went to retreive a sample she found out now Diane Jones	SALLY

04 06

	was running the business not Mr Upchurch. Trina does not know if the system is an active system at this time so Sally will send region an email to do a focus investigation on this system because no bact samples are coming in at this time.	PARAMO
11/05/2008	CDF REVIEW: System name changed from SOUTH 40 CONVENIENCE STORE to RISING STAR per CDF prepared by Jimmie Upchurch dated 9/10/08. Faxed CDF to Central Registry---tcisneros	THERESA CISNEROS
09/18/2008	AFFILIATION notes: Mike King is the owner of the property where the well resides. Mr King sold his business to Jimmie Upchurch but Mr Upchurch will lease the property where the well resides for a period of 15 yrs effective Feb 2008. Mr King will be listed as our PWS contact just so he is aware of any violations against the system which his well is providing water. Mr Upchurch will be listed as the responsible party because he owns the business. In the event of legal matters, we will list Mr Upchurch as the RP and only if Mr Upchurch defaults, then we can file after Mr King because he was aware of the situation by being notified of violations that could effective the health and safety of citizens.	SALLY PARAMO
10/20/2004	OWNERSHIP CHANGED FROM BARBARA RUDD TO MIKE KING---TC.	
08/27/2004	SYSTEM NAME CHANGED FROM RUDD COUNTRY INC TO SOUTH 40 CONVENIENCE STORE. SEE MEMO DATED 8/11/04---TC.	SALLY PARAMO

Occurrences retrieved.

Run Water System Data Sheet Report

No occurrences retrieved.

For questions or comments regarding information on this page, contact the TCEQ iWUD Web Manager

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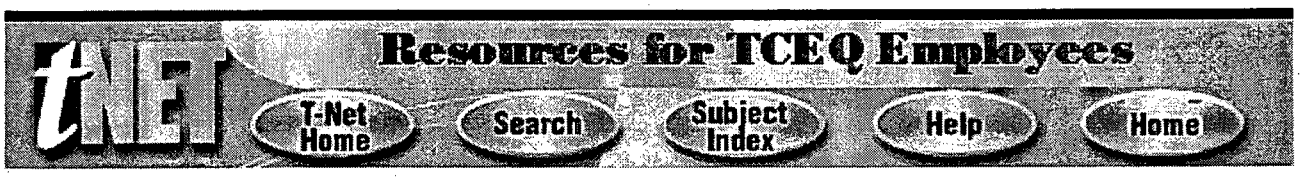
04 07



Public Water Systems Details/Data Sheet for TOWN & COUNTRY (1520179)

Affiliations Comments Samples Schedules Fee Site Visits Documents
Violations Sources Sold Source Entry Points Plants

Responsible Party

Organization: **TOWN AND COUNTRY INC**
Address: **3513 50TH ST**
LUBBOCK, TX 79413-4015
Individual: **J R BROOKS**
Job Title: **SENIOR V P** Phone: **(806) 791-5000**

Occurences were successfully retrieved.

Customers

Reference Number	Name	Role
CN600891287	TOWN & COUNTRY FOOD STORES INC	OWNER OPERATOR
CN601500663	TOWN AND COUNTRY INC	RESPONSIBLE PARTY

Properties

CR Regulated Entity Number: **RN101770717**
CCEDS Status: **ACTIVE NOE EXISTS**
Ownership Type: **PRIVATE**
System Type: **TRANSIENT/NON-COMMUNITY**
County: **LUBBOCK (152)**
Region: **LUBBOCK (2)**
All Monitoring Class: **GROUNDWATER**
Owned Monitoring Class: **GROUNDWATER**
Out of Season:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Customer Groups

Class	Category	Population Count	Connection Count	Meter Count
TRANSIENT	OTHER TRANSIENT AREA	850	1	1

No occurrences retrieved.

Capacity

Total Storage:

04 08

Total Storage: **0.000 MG**

Elevated Storage: **0.000 MG**

Pressure Tank Capacity: **0.00022 MG**

Production:

Total Production: **0.014 MGD**

Max Purchased Capacity: **0.000 MGD**

Emergency Production: **0.000 MGD**

Total Service Capacity: **0.000 MGD**

Service Pump Capacity: **0.000 MGD**

Emergency Service Capacity: **0.000 MGD**

Consumption:

Avg Daily Consumption: **0.000 MGD**

Max Daily Consumption: **0.000 MGD**

Activity

Activity Status: **ACTIVE**

Site Visits

Survey Date	Visit Type	Deficiency Score	Inspector
07/21/2000	SURVEY	17	LANCE OWENS
07/25/2001	SURVEY	32	LANCE OWENS
07/10/2002	SURVEY	2	LANCE OWENS
06/07/2004	SURVEY	5	LANCE OWENS
09/19/2005	SURVEY	5	LANCE OWENS

Site Visit occurrences retrieved.

Comments

Comment Date	Text	Staff Name
01/19/2010	POCUPDATE;PHS;COUPON:Updated BC record from POBox 5581, San Angelo, TX 76902-5581 to Barbara Milfelt, PO Box 9036, Corpus Christi, TX 78469-9036, phone 361-693-3609 (verified with USPS) as indicated on coupon.	CARMEN CARDENAS

Occurrences retrieved.

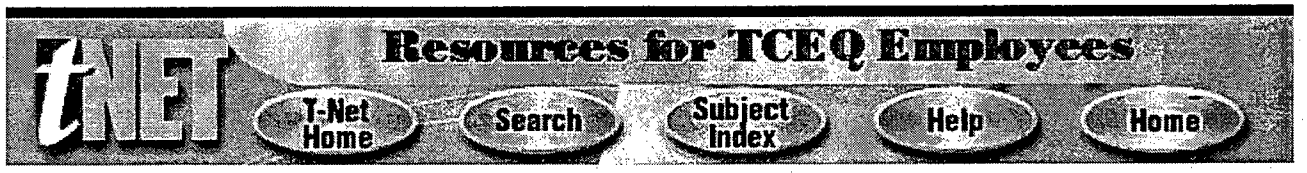
Run Water System Data Sheet Report

No occurrences retrieved.

For questions or comments regarding information on this page, contact the TCEQ iWUD Web Manager

Version V2.2.8

04 09



Public Water Systems Details/Data Sheet for TASTE OF MEXICO (1520180)

Affiliations Comments Samples Schedules Fee Site Visits Documents
Violations Sources Sold Source Entry Points Plants

Responsible Party

Address: **5811 87TH ST**
LUBBOCK, TX 79424-5503
Individual: **ASHOK K MITTAL**
Job Title: **OWNER** Phone: **(806) 745-3515**

Occurences were successfully retrieved.

Customers

Reference Number	Name	Role
CN602523235	MITTAL, A K	RESPONSIBLE PARTY

Properties

CR Regulated Entity Number: **RN102315736**
CCEDS Status: **ACTIVE NOE EXISTS**
Ownership Type: **PRIVATE**
System Type: **TRANSIENT/NON-COMMUNITY**
County: **LUBBOCK (152)**
Region: **LUBBOCK (2)**
All Monitoring Class: **GROUNDWATER**
Owned Monitoring Class: **GROUNDWATER**
Out of Season:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Customer Groups

Class	Category	Population Count	Connection Count	Meter Count
TRANSIENT	RESTAURANT	75	3	1

No occurrences retrieved.

Capacity

Total Storage:

Total Storage: **0.000 MG**
0.000 MG

04 10

Elevated Storage:

Pressure Tank Capacity: **0.00025 MG**

Production:

Total Production: **0.000 MGD**

Max Purchased Capacity: **0.000 MGD**

Emergency Production: **0.000 MGD**

Total Service Capacity: **0.000 MGD**

Service Pump Capacity: **0.000 MGD**

Emergency Service Capacity: **0.000 MGD**

Consumption:

Avg Daily Consumption: **0.000 MGD**

Max Daily Consumption: **0.000 MGD**

Activity

Start Date: **07/14/2003**

End Date: **06/12/2006**

Activity Date: **06/16/2006**

Activity Status: **INACTIVE**

Activity Reason: **CHANGE**

Site Visits

Survey Date	Visit Type	Deficiency Score	Inspector
10/18/1999	SURVEY	10	SUSAN NEWCOMB
10/24/2000	SURVEY	13	MALCOLM LAING
03/27/2003	SURVEY	0	LANCE OWENS
12/10/2004	SURVEY	2	LANCE OWENS
08/30/2007	CCI-RCVD MD09/05/2007,RD09/11/2007	0	LANCE OWENS
04/30/2008	FOCUS	0	LANCE OWENS

Site Visit occurrences retrieved.

Comments

Comment Date	Text	Staff Name
10/23/2008	UPDATE: System name change from WES TEXAS FAMILY DINING to TASTE OF MEXICO. An Focus investigation was conducted and found that the restaurant closed for business on March 11, 2008, but does indicate that the restaurant could open again at a later date----tcisneros	THERESA CISNEROS
08/08/2008	INACTIVATION: Memo/request dated 05/05/2008 received from Mr. Lance Owens, Lubbock Region conducted an investigation - officially inactivated effective date of memo. Inactivation completed 09/11/07	DARLENE TREVILLION
11/28/2007	SYSTEM name changed from DOS AMIGOS MEXICAN RESTAURANT to WES TEXAS FAMILY DINING per CDF prepared by Lance Owens rec'd from Central Ristry---tcisneros	THERESA CISNEROS
09/11/2007	INACTIVATION letter dated 8/5/07 from region 2 stating conducted an investigation and found that this water system is now closed for business. If the business is to re-open the individual having responsibility must notify TCEQ within 30 days of system change in status. System is now known as WES-TEXAS FAMILY DINING---tcisneros	THERESA CISNEROS

04 11

06/16/2006	INACTIVATED SYSTEM PER REGION 2, LANCE OWENS, STATING DROVE BY AND CONFIRMED THAT RESTAURANT IS CLOSED FOR REMODELING AND A SIGN OUT FRONT READS "PRIVATE PARTY ROOM, FOR RESERVATIONS CALL.....".----TC.	SALLY PARAMO
04/06/2006	SYSTEM NAME CHANGED FROM PIRATES RESTAURANT TO DOS AMIGOS MEXICAN RESTAURANT. OWNERSHIP ALSO CHANGED FROM RAMONA LIGHT TO A K MITTAL. SEE CORE DATA FORM WITH DATA SHEET CHANGE-----TC.	SALLY PARAMO
03/29/2006	REC'D RETURN MAIL - FY06 PHS FEE --- BW	
07/14/2003	REACTIVATED SYSTEM. SYSTEM NAME CHANGED FROM JOANNS FAMILY RESTAURANT 2 TO PIRATES RESTAURANT. SEE CCI DATED 3/27/2003--TC.	
02/07/2003	INACTIVE SYSTEM.	LARRY MITCHELL
06/14/2001	6//1/01-FORMERLY RIVER SMITHS OUTPOST	

Occurrences retrieved.

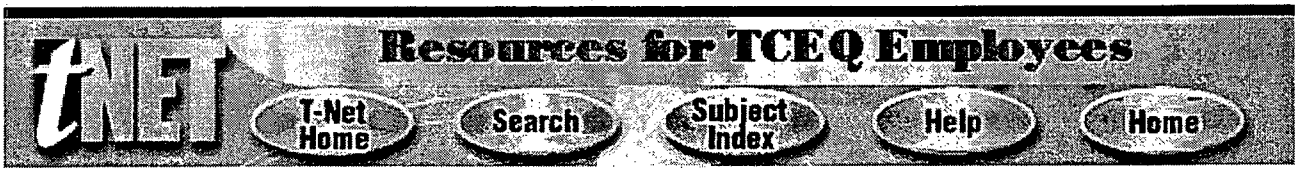
Run Water System Data Sheet Report

No occurrences retrieved.

For questions or comments regarding information on this page, contact the TCEQ iWUD Web Manager

Version V2.2.8

04 12



Public Water Systems Details/Data Sheet for GREAT SCOTTS BBQ WATER SUPPLY (1520209)

Affiliations Comments Samples Schedules Fee Site Visits Documents
Violations Sources Sold Source Entry Points Plants

Responsible Party

Address: **RR 6 BOX 744**
LUBBOCK, TX 79423
Individual: **DONNIE BAKER**
Job Title: **OWNER** Phone: **(806) 745-7890**

Occurences were successfully retrieved.

Customers

Reference Number	Name	Role
CN600670061	BAKER, DONNIE	RESPONSIBLE PARTY

Properties

CR Regulated Entity Number: **RN101230241**
CCEDS Status: **NO ACTIVE NOE EXISTS**
Ownership Type: **PRIVATE**
System Type: **TRANSIENT/NON-COMMUNITY**
County: **LUBBOCK (152)**
Region: **LUBBOCK (2)**
All Monitoring Class: **GROUNDWATER**
Owned Monitoring Class: **GROUNDWATER**
Out of Season:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Customer Groups

Class	Category	Population Count	Connection Count	Meter Count
TRANSIENT	RESTAURANT	150	2	0

No occurrences retrieved.

Capacity

Total Storage:

Total Storage: **0.000 MG**
0.000 MG

04 13

Elevated Storage:

Pressure Tank Capacity: **0.00025 MG**

Production:

Total Production: **0.000 MGD**

Max Purchased Capacity: **0.000 MGD**

Emergency Production: **0.000 MGD**

Total Service Capacity: **0.000 MGD**

Service Pump Capacity: **0.000 MGD**

Emergency Service Capacity: **0.000 MGD**

Consumption:

Avg Daily Consumption: **0.000 MGD**

Max Daily Consumption: **0.000 MGD**

Activity

Activity Date: **05/20/1993**

Activity Status: **INACTIVE**

Activity Reason: **NO DATA**

Site Visits

Survey Date	Visit Type	Deficiency Score	Inspector
05/20/1993	SURVEY	38	BOB HARRISON

Site Visit occurrences retrieved.

Comments

Comment Date	Text	Staff Name
10/10/2007	Status is kept INACTIVE, the facility is still in use. An Focused Investigation conducted on 06/18/07 by Malcolm Laing. Restrauant has closed since 1993. Per Focused Investigation the building is still being only used on rare weekends when the Sunday School classes exceed the capacity of the Refuge Outreach Center which is located next door. Focused Investigation determined that this facility does not meet the criteria for a PWS---tcisneros	THERESA CISNEROS

Occurrences retrieved.

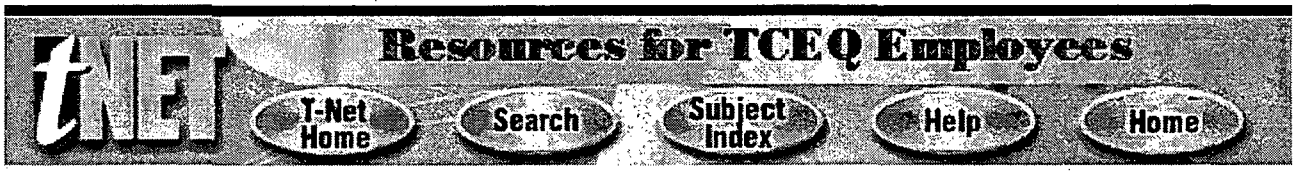
Run Water System Data Sheet Report

No occurrences retrieved.

For questions or comments regarding information on this page, contact the TCEQ iWUD Web Manager

Version V2.2.8

04 14



Public Water Systems Details/Data Sheet for COOPER DRIVE IN (1520222)

Affiliations Comments Samples Schedules Fee Site Visits Documents
Violations Sources Sold Source Entry Points Plants

Responsible Party

Address: **5811 87TH ST**
LUBBOCK, TX 79424-5503
Individual: **DENO TZEMOS**
Job Title: **OWNER** Phone: **(806) 745-3515**

Occurences were successfully retrieved.

Customers

Reference Number	Name	Role
CN600681522	TZEMOS, DENO	RESPONSIBLE PARTY

Properties

CR Regulated Entity Number: **RN101245157**
CCEDS Status: **NO ACTIVE NOE EXISTS**
Ownership Type: **PRIVATE**
System Type: **TRANSIENT/NON-COMMUNITY**
County: **LUBBOCK (152)**
Region: **LUBBOCK (2)**
All Monitoring Class: **GROUNDWATER**
Owned Monitoring Class: **GROUNDWATER**
Out of Season:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Customer Groups

Class	Category	Population Count	Connection Count	Meter Count
TRANSIENT	RESTAURANT	100	1	1

No occurrences retrieved.

Capacity

Total Storage:

Total Storage: **0.000 MG**
0.000 MG

04 15

Elevated Storage:

Pressure Tank Capacity: **0.00024 MG**

Production:

Total Production: **0.014 MGD**

Max Purchased Capacity: **0.000 MGD**

Emergency Production: **0.000 MGD**

Total Service Capacity: **0.000 MGD**

Service Pump Capacity: **0.000 MGD**

Emergency Service Capacity: **0.000 MGD**

Consumption:

Avg Daily Consumption: **0.000 MGD**

Max Daily Consumption: **0.000 MGD**

Activity

Activity Status: **ACTIVE**

Site Visits

Survey Date	Visit Type	Deficiency Score	Inspector
06/13/2000	SURVEY	14	LANCE OWENS
05/04/2001	SURVEY	0	MALCOLM LAING
05/16/2002	SURVEY	0	KRISTA PERCIVAL
06/10/2004	SURVEY	0	KRISTA PERCIVAL
02/04/2005	SURVEY	2	JASON LINDEMAN
12/13/2006	SURVEY MD12/22/2006,RD01/08/2007	12	JASON LINDEMAN
01/08/2009	SURVEY MD01/15/2009,RD01/21/2009	2	MALCOLM LAING

Site Visit occurrences retrieved.

Comments

Comment Date	Text	Staff Name
07/13/2009	CCI AFFIL REVIEW found in Lubbock CAD (OWNER ID OO219195), current owner COOPER DRIVE IN (O0219195) c/o DOLLAR VARIETY STORE INC A K MITTEL 5811 87TH ST LUBBOCK, TX 79424-5503. Find Dollar Variety Store Inc in SOS, TID 17528547072 in existence. Update WUD to reflect the organization. FO'd Mr. A. K. Mittal as sole proprietor. Research Google Map 1102 FM 1585, Lubbock TX, found that this site is a single building. Email Central Registry to assign CN to DOLLAR VARIETY STORE INC. -----Disregard top part of this comments found that MR. DENO TZEMOS is the owner of the property see LUBBOCK CAD Owner ID: OO75015, Owner Name: TZEMOS DENO, Owner Address: 5811 87TH ST, LUBBOCK,TX 79424, Property Address: 1102 FM 1585, LUBBOCK, TX 79423.	THERESA CISNEROS
02/10/2007	Reviewed affiliation per CCI conducted on 12/13/06 - Responsible Official "A MITTAL" NOT found in TX Comptroller database or SOS--tc	THERESA CISNEROS
12/05/2003	OWNERSHIP CHANGED ON 12/02 - NEW OWNER IS A. K. MITTAL. PREVIOUS OWNER WAS DENIS TZEMOS. CREDIT FEE FOR FY 95, 97 - 2002 ON 3/19/03--TC.	

Occurrences retrieved.

Run Water System Data Sheet Report

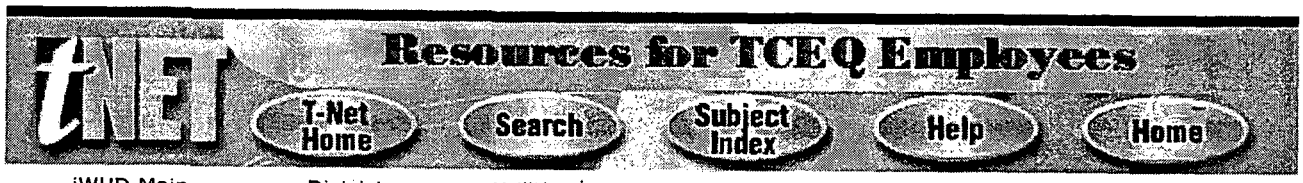
No occurrences retrieved.

04 16

For questions or comments regarding information on this page, contact the TCEQ iWUD Web Manager

Version V2.2.8

04 17



Public Water Systems Details/Data Sheet for TAYLOR PETROLEUM CO 61 (1520229)

Affiliations Comments Samples Schedules Fee Site Visits Documents
Violations Sources Sold Source Entry Points Plants

Responsible Party

Organization: **TAYLOR PETROLEUM COMPANIES INC**
Address: **PO BOX 9000**
C/O GREG HENDRICKS VICE PRESIDNET
AMARILLO, TX 79105-9000
Individual: **LARRY JACK TAYLOR**
Job Title: **VICE PRESIDENT** Phone: **(806) 748-8145**

Occurences were successfully retrieved.

Customers

Reference Number	Name	Role
CN603047275	ZEPHYR HOLDINGS LLC	OWNER
CN601260730	TAYLOR PETROLEUM COMPANIES INC	OWNER OPERATOR

Properties

CR Regulated Entity Number: **RN101885069**
CCEDS Status: **ACTIVE NOE EXISTS**
Ownership Type: **INVESTOR**
System Type: **TRANSIENT/NON-COMMUNITY**
County: **LUBBOCK (152)**
Region: **LUBBOCK (2)**
All Monitoring Class: **GROUNDWATER**
Owned Monitoring Class: **GROUNDWATER**
Out of Season:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Customer Groups

Class	Category	Population Count	Connection Count	Meter Count
TRANSIENT	SERVICE STATION	600	1	1

Occurrences retrieved.

Capacity

04 18

Total Storage:

Total Storage: **0.001 MG**

Elevated Storage: **0.000 MG**

Pressure Tank Capacity: **0.00026 MG**

Production:

Total Production: **0.014 MGD**

Max Purchased Capacity: **0.000 MGD**

Emergency Production: **0.000 MGD**

Total Service Capacity: **0.000 MGD**

Service Pump Capacity: **0.086 MGD**

Emergency Service Capacity: **0.000 MGD**

Consumption:

Avg Daily Consumption: **0.000 MGD**

Max Daily Consumption: **0.000 MGD**

Activity

Activity Date: **10/08/2001**

Activity Status: **ACTIVE**

Operator Grades

Grade	Total
WATER GRADE D	1

Occurrences retrieved.

Site Visits

Survey Date	Visit Type	Deficiency Score	Inspector
10/27/1998	SURVEY	32	SUSAN NEWCOMB
10/08/2001	SURVEY	0	LANCE OWENS
03/10/2004	SURVEY	0	KRISTA PERCIVAL
03/19/2007	SURVEY MD04/26/2007,RD07/01/2008	12	JASON LINDEMAN
04/29/2009	SURVEY	0	MALCOLM LAING

Site Visit occurrences retrieved.

Comments

Comment Date	Text	Staff Name
09/11/2008	CCI AFFIL REVIEW No Active NOE Exists (Notice of Enforcement). Verified organization TAYLOR PETROLEUM COMPANIES, INC. in existence SOS and comptrollers website, TAX ID # 17527194470, LARRY JACK TAYLOR is the President of the organization. The mailing address of PO BOX 9000, Amarillo TX 79105 - 9000 is valid per USPS. Update RP to Larry Jack Taylor, President to comply with SOP. Add Greg Hendricks as C/O is address line 2.	PAMELA GREEN
	REACTIVATED THE SYSTEM, UNDER NEW OWNERSHIP AND NEW NAME. FORMERLY	LANCE

04 19

03/21/2002 SUNWEST CONVENIENCE STORE #414. OWENS
Occurrences retrieved.

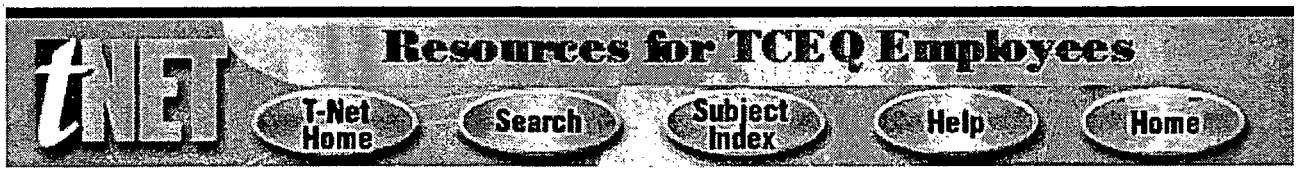
Run Water System Data Sheet Report

Occurrences retrieved.

For questions or comments regarding information on this page, contact the TCEQ iWUD Web Manager

Version V2.2.8

04 20



Public Water Systems Details/Data Sheet for COUNTRY LIVINGS MOBILE HOME PARK (1520230)

Affiliations | Comments | Samples | Schedules | Fee | Site Visits | Documents
Violations | Sources | Sold Source | Entry Points | Plants

Responsible Party

Address: **PO BOX 3076**
LUBBOCK, TX 79452-3076
Individual: **BRANDON BLACK**
Job Title: **OWNER** Phone: **(806) 535-5426**

Occurences were successfully retrieved.

Customers

Reference Number	Name	Role
CN603200288	BLACK, BRANDON	OWNER
CN600640361	DOUGHERTY, JIM	RESPONSIBLE PARTY

Properties

CR Regulated Entity Number: **RN101194587**
CCEDS Status: **NO ACTIVE NOE EXISTS**
Ownership Type: **PRIVATE**
System Type: **COMMUNITY**
County: **LUBBOCK (152)**
Region: **LUBBOCK (2)**
All Monitoring Class: **GROUNDWATER**
Owned Monitoring Class: **GROUNDWATER**
Out of Season:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Customer Groups

Class	Category	Population Count	Connection Count	Meter Count
RESIDENTIAL	MOBILE HOME PARK	25	10	0

No occurrences retrieved.

Capacity

Total Storage:

04 21

Total Storage: **0.000 MG**

Elevated Storage: **0.000 MG**

Pressure Tank Capacity: **0.00010 MG**

Production:

Total Production: **0.000 MGD**

Max Purchased Capacity: **0.000 MGD**

Emergency Production: **0.000 MGD**

Total Service Capacity: **0.000 MGD**

Service Pump Capacity: **0.000 MGD**

Emergency Service Capacity: **0.000 MGD**

Consumption:

Avg Daily Consumption: **0.000 MGD**

Max Daily Consumption: **0.000 MGD**

Activity

Activity Date: **10/02/1995**

Activity Status: **INACTIVE**

Site Visits

Survey Date	Visit Type	Deficiency Score	Inspector
10/02/1995	SURVEY	41	BOB PURKISS
06/18/2007	FOCUS	0	MALCOLM LAING

Site Visit occurrences retrieved.

Comments

Comment Date	Text	Staff Name
10/25/2007	Focus investigation conducted on 06/18/07 determined that this facility does not meet the criteria for a PWS. System name also changed from CLAUDIAS MOBILE HOME PARK to COUNTRY LIVINGS MOBILE HOME PARK------tcisneros	THERESA CISNEROS

Occurrences retrieved.

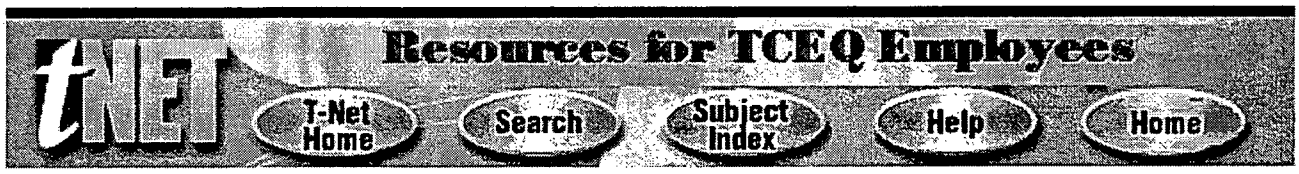
Run Water System Data Sheet Report

No occurrences retrieved.

For questions or comments regarding information on this page, contact the TCEQ iWUD Web Manager

Version V2.2.8

04 22



Public Water Systems Details/Data Sheet for DOUBLE T DISCOUNT LIQUOR (1520248)

Affiliations Comments Samples Schedules Fee Site Visits Documents
Violations Sources Sold Source Entry Points Plants

Responsible Party

Organization: **MAJESTIC LIQUOR STORES INC**
Address: **10101 HIGHWAY 87**
C/O JOHNNY STONE - LUBBOCK SUPERVISOR
LUBBOCK, TX 79423-7223
Individual: **BEN A LANFORD**
Job Title: **PRESIDENT** Phone: **(806) 745-5092**

Occurences were successfully retrieved.

Customers

Reference Number	Name	Role
CN603396839	MAJESTIC LIQUOR STORES INC	OWNER OPERATOR

Properties

CR Regulated Entity Number: **RN101248342**
CCEDS Status: **NO ACTIVE NOE EXISTS**
Ownership Type: **PRIVATE**
System Type: **TRANSIENT/NON-COMMUNITY**
County: **LUBBOCK (152)**
Region: **LUBBOCK (2)**
All Monitoring Class: **GROUNDWATER**
Owned Monitoring Class: **GROUNDWATER**
Out of Season:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Customer Groups

Class	Category	Population Count	Connection Count	Meter Count
TRANSIENT	OTHER TRANSIENT AREA	9	3	0

No occurrences retrieved.

Capacity

Total Storage:

04 23

Total Storage: **0.000 MG**

Elevated Storage: **0.000 MG**

Pressure Tank Capacity: **0.00023 MG**

Production:

Total Production: **0.024 MGD**

Max Purchased Capacity: **0.000 MGD**

Emergency Production: **0.000 MGD**

Total Service Capacity: **0.000 MGD**

Service Pump Capacity: **0.000 MGD**

Emergency Service Capacity: **0.000 MGD**

Consumption:

Avg Daily Consumption: **0.000 MGD**

Max Daily Consumption: **0.000 MGD**

Activity

Activity Date: **01/02/2004**

Activity Status: **ACTIVE**

Activity Reason: **CHANGE**

Site Visits

Survey Date	Visit Type	Deficiency Score	Inspector
	SURVEY	-1	
10/30/2003	SURVEY	4	MALCOLM LAING
09/08/2005	SURVEY	0	MALCOLM LAING
04/25/2007	SURVEY	7	MALCOLM LAING
08/12/2008	FOCUS MD05/09/2007,RD05/22/2007	0	LANCE OWENS
10/01/2009	SURVEY MD08/15/2008,RD08/20/2008	5	JASON LINDEMAN

Site Visit occurrences retrieved.

Comments

Comment Date	Text	Staff Name
12/15/2008	FOCUS AFFIL REVIEW - NO NOE pending - The organization changed from Jimmy Dunlap to MAJESTIC LIQUORS INC found in SOS tax id 17509175430 in existence. Double T discount Liquor is an assumed name. In SOS MAJESTIC LIQUOR STORES INC address is PO BOX 9540, FORT WORTH, TX 76147-2540 and the President is Ben A. Lanford Jr. Update RP data and included Johnny Stone , Lubbock Supervisor and Lubbock address. Email CR to update organization from Majestic Liquors Inc to MAJESTIC LIQUOR STORES INC. Also update the Owner Type from Investor to Private----tcisneros	THERESA CISNEROS
07/02/2007	Per call to Jimmy Dunlap (alt # on RP) this system will be sold in approx 2 weeks, currently CAD has 2 different names listed as the owner of the property: Docs Liquor & Beer Store & Jimmy & Natu Patel Dunalp. Jimmy could not remember which was correct & I could not verify in SOS. Further research may need to be done. Verified address in USPS, updated Jimmy's name from Dunlay to Dunlap, updated owner type to private from investor, added alt # for Jimmy. ~DCourtney	MARIE KNIPFER
09/30/2005	MPY-FR04/12/05-TC.	

04 24

01/02/2004 ACTIVATE SYSTEM - SEE CCI DATED 10/30/03---TC.
Occurrences retrieved.

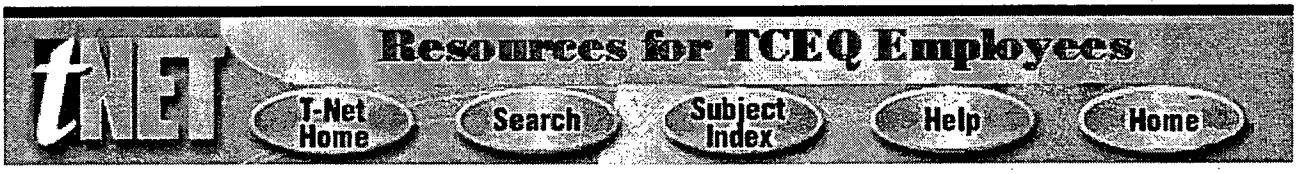
Run Water System Data Sheet Report

No occurrences retrieved.

For questions or comments regarding information on this page, contact the TCEQ iWUD Web Manager

Version V2.2.8

04 25



Public Water Systems Details/Data Sheet for WESTERN TERRACE MOBILE HOME PARK (1520047)

Affiliations Comments Samples Schedules Fee Site Visits Documents
Violations Sources Sold Source Entry Points Plants

Responsible Party

Address: **910-132ND ST**
LUBBOCK, TX 79423
Individual: **LISA COFFMAN**
Job Title: **OWNER** Phone: **(806) 745-0997**

Occurences were successfully retrieved.

Customers

Reference Number	Name	Role
CN600671101	COFFMAN, LISA	RESPONSIBLE PARTY

Properties

CR Regulated Entity Number: **RN101231504**
CCEDS Status: **ACTIVE NOE EXISTS**
Ownership Type: **PRIVATE**
System Type: **COMMUNITY**
County: **LUBBOCK (152)**
Region: **LUBBOCK (2)**
All Monitoring Class: **GROUNDWATER**
Owned Monitoring Class: **GROUNDWATER**
Out of Season:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Customer Groups

Class	Category	Population Count	Connection Count	Meter Count
RESIDENTIAL	MOBILE HOME PARK	36	18	2

Occurrences retrieved.

Capacity

Total Storage:

04 26

Total Storage: **0.000 MG**

Elevated Storage: **0.000 MG**

Pressure Tank Capacity: **0.00300 MG**

Production:

Total Production: **0.000 MGD**

Max Purchased Capacity: **0.000 MGD**

Emergency Production: **0.000 MGD**

Total Service Capacity: **0.000 MGD**

Service Pump Capacity: **0.000 MGD**

Emergency Service Capacity: **0.000 MGD**

Consumption:

Avg Daily Consumption: **0.000 MGD**

Max Daily Consumption: **0.000 MGD**

Activity

Activity Date: **10/08/2002**

Activity Status: **INACTIVE**

Operator Grades

Grade	Total
WATER GRADE D	1

Occurrences retrieved.

Site Visits

Survey Date	Visit Type	Deficiency Score	Inspector
12/08/1999	SURVEY	22	LANCE OWENS
12/15/2000	SURVEY	10	LANCE OWENS
12/06/2001	SURVEY	12	LANCE OWENS

Site Visit occurrences retrieved.

Comments

Comment Date	Text	Staff Name
10/08/2002	INACTIVE SYSTEM-REGION HAS SENT MEMO.	LARRY MITCHELL

Occurrences retrieved.

Run Water System Data Sheet Report

Occurrences retrieved.

04 27

For questions or comments regarding information on this page, contact the TCEQ iWUD Web Manager

Version V2.2.8

04 28

Public Water Systems Details/Data Sheet for COUNTRY SQUIRE MHP 2 (1520155)

Affiliations | Comments | Samples | Schedules | Fee | Site Visits | Documents
Violations | Sources | Sold Source | Entry Points | Plants

Responsible Party

Address: **9717 N DETROIT AVE TRLR 163**
LUBBOCK, TX 79415-7629
Individual: **BRUCE JOHNSON**
Job Title: **OWNER** Phone: **(806) 746-5625**

Occurences were successfully retrieved.

Customers

Reference Number	Name	Role
CN602518565	JOHNSON, BRUCE	RESPONSIBLE PARTY

Properties

CR Regulated Entity Number: **RN101180438**
CCEDS Status: **ACTIVE NOE EXISTS**
Ownership Type: **PRIVATE**
System Type: **COMMUNITY**
County: **LUBBOCK (152)**
Region: **LUBBOCK (2)**
All Monitoring Class: **GROUNDWATER**
Owned Monitoring Class: **GROUNDWATER**
Out of Season:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Customer Groups

Class	Category	Population Count	Connection Count	Meter Count
RESIDENTIAL	MOBILE HOME PARK	75	14	1

Occurrences retrieved.

Capacity

Total Storage:

Total Storage: **0.000 MG**
0.000 MG

04 29

Elevated Storage:

Pressure Tank Capacity: **0.00099 MG**

Production:

Total Production: **0.057 MGD**

Max Purchased Capacity: **0.000 MGD**

Emergency Production: **0.000 MGD**

Total Service Capacity: **0.000 MGD**

Service Pump Capacity: **0.000 MGD**

Emergency Service Capacity: **0.000 MGD**

Consumption:

Avg Daily Consumption: **0.016 MGD**

Max Daily Consumption: **0.000 MGD**

Activity

Activity Status: **ACTIVE**

Operator Grades

Grade	Total
WATER GRADE D	2

Occurrences retrieved.

Site Visits

Survey Date	Visit Type	Deficiency Score	Inspector
03/03/2000	SURVEY	10	MALCOLM LAING
03/07/2001	SURVEY	0	MALCOLM LAING
02/04/2004	SURVEY	0	LANCE OWENS
04/05/2006	SURVEY MD04/07/2006,RD04/18/2006	0	LANCE OWENS
01/15/2008	SURVEY MD01/30/2008,RD02/05/2008	0	MALCOLM LAING
11/02/2009	SURVEY	0	MALCOLM LAING

Site Visit occurrences retrieved.

Comments

Comment Date	Text	Staff Name
06/15/2010	REMAIL:FLQ1-FLQ4/NOV,N,06/15/2010 RETURNMAIL:FLQ1/NOV,Y,LD05/14/2010,RD06/11/2010,UCLMD RETURNMAIL:FLQ4/NOV,Y,LD03/12/2010,RD04/09/2010,UCLMD	MIA GONZALES
11/02/2009	REMAIL:DLNOVQ209,N,11/02/2009 RETURN MAIL:DLNOVQ209,Y,LD10/01/2009,RD10/26/2009,UCLMD. REMAIL:FI/NOV,N,10/12/2009 RETURN MAIL:FI/NOV,Y,LD07/07/2009,RD08/07/2009,UCLMD. REMAIL:DLQOR4/NOV,N,06/12/2009 RETURN MAIL:FI/NOV,Y,LD05/07/2009,RD06/08/2009,UCLMD, AFFIL research incomplete. RETURN MAIL:PN/NOV,Y,LD04/24/2009,RD05/29/2009,UCLMD. AFFIL research not complete.---MAG RETURN MAIL:DLQOR4/NOV,Y,LD003/27/2009,RD04/30/2009,UCLMD. AFFIL research not	MIA GONZALES

04 30

	complete.---MAG RETURN MAIL:NOV/F,Y,N,LD01/16/2009,RD02/18/2009,UCLMD. AFFIL research not done.---MAG RETURN MAIL:NOV/F,Y,LD11/08/2007,RD00/00/0000,UCLMD. AFFIL research not done.---MAG	
09/14/2009	ENFORCEMENT ACTION REFERRAL REVIEW: Reviewed for a Fluoride EAR. Verified USPS 9717 N DETROIT AVE # 163, LUBBOCK TX 79415-7629. Found property at 13601 136TH St, Lubbock, TX 79423 that is right at the corner of 136TH Street and Ave L owned by Bruce Johnson, R98879. CR has the physical address listed as 1225 136TH ST LUBBOCK TX 79423-5917, but Lubbock CAD does not recognize this address. However, the location is the same 13601 136TH St, when looking at a map. Also, added Mr. Johnson is an EC	JACOLYN BOLDING
06/18/2008	CCI AFFIL REVIEW An Active NOE Exists (Notice of Enforcement). Could not locate Bruce Johnson in SOS or comptrollers website. Researched WUD RP Bruce Johnson in Lubbock CAD and found him as the owner of two residential properties; which are located in a mobile home community (per google maps). (1) ID: R139790; property address: 2906 WELLS STLUBBOCK, TX 79415 approx. size acres (0.404); real residential Mobile Home. (2) ID: R139789; property address: 2904 WELLS ST LUBBOCK, TX 79415. The WUD mailing address of 9717 N Detroit AVE # 163, Lubbock TX 79415 - 7629 is valid per USPS furthermore, N Detroit Avenue intersects with Wells Street. WUD is clean and no futher updates per CCI Investigator.	PAMELA GREEN
04/25/2006	UPDATED ORGANIZATION. SEE CCI DATED 4/05/06----TC.	
07/12/2002	NEW OWNER-BRUCE JOHNSON.	LANCE OWENS

Occurrences retrieved.

Run Water System Data Sheet Report

Occurrences retrieved.

For questions or comments regarding information on this page, contact the TCEQ iWUD Web Manager

Version V2.2.8

04 31

Public Water Systems Details/Data Sheet for JAGUARS GOLD CLUB LUBBOCK (1520263)

Affiliations | Comments | Samples | Schedules | Fee | Site Visits | Documents
Violations | Sources | Sold Source | Entry Points | Plants

Responsible Party

Organization: **AULT PROPERTIES INC**
Address: **51 SUNSET RIDGE RD**
MAXWELL, TX 78656-4264
Individual: **CHARLES AARON AULT**
Job Title: **DIRECTOR** Phone: **(512) 398-1946**

Occurences were successfully retrieved.

Customers

Reference Number	Name	Role
CN603546185	AULT PROPERTIES INC	OWNER

Properties

CR Regulated Entity Number: **RN105818264**
CCEDS Status: **NO ACTIVE NOE EXISTS**
Ownership Type: **PRIVATE**
System Type: **TRANSIENT/NON-COMMUNITY**
County: **LUBBOCK (152)**
Region: **LUBBOCK (2)**
All Monitoring Class: **GROUNDWATER**
Owned Monitoring Class: **GROUNDWATER**
Out of Season:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Customer Groups

Class	Category	Population Count	Connection Count	Meter Count
TRANSIENT	OTHER TRANSIENT AREA	30	1	1

No occurrences retrieved.

Capacity

Total Storage:

Total Storage: **0.000 MG**

04 32

Elevated Storage: **0.000 MG**

Pressure Tank Capacity: **0.00000 MG**

Production:

Total Production: **0.000 MGD**

Max Purchased Capacity: **0.000 MGD**

Emergency Production: **0.000 MGD**

Total Service Capacity: **0.000 MGD**

Service Pump Capacity: **0.000 MGD**

Emergency Service Capacity: **0.000 MGD**

Consumption:

Avg Daily Consumption: **0.000 MGD**

Max Daily Consumption: **0.000 MGD**

Activity

Start Date: **10/15/2009**

End Date: **12/31/3000**

Activity Date: **10/15/2009**

Activity Status: **ACTIVE**

Activity Reason: **FOD DISCOVERED**

Site Visits

Survey Date	Visit Type	Deficiency Score	Inspector
10/01/2009	FOCUS	0	JASON LINDEMAN
10/15/2009	EVAL-ACT PER RGN 2 JASON LINDEMAN	0	MIA GONZALES

Site Visit occurrences retrieved.

Comments

Comment Date	Text	Staff Name
05/11/2010	REVIEWED;PWSREP;PHONE: PHS FEE question via phone call from David Macko, 682-831-0044, stating that Jaguars Gold Club has several location in texas and the fee has been going to the Charles Ault address. Mr. Ault is the manager of the location in LUBBOCK. Requested that bill to go to PO BOX 77141, Fort Worth, TX 76177. Add BC data. Added Lubbock to the regulated name.	THERESA CISNEROS
12/21/2009	FOCUS: Physical intersetion of US HWY 87 and FM 1585, approximately 2 mi south of Lubbock. "An on site well (located north of the building) is used to provide water for ice, showers and restrooms. Due to the nature of the business an estimate of the number of persons served is unknown at the time." "There did not appear to be any disinfection or pressure maintenance facilities. Mr Ault stated the system has been in operation since 1985 but that he hadn't personnally operated the business in 5 or 6 years....numerous records had been lost and that site management had been unstable in the past several years since the previous site manager was murdered in the arking lot.Mr Ault stated the club is currenlty operated by Mr Brian Niko Foster from an out of town management company. Mr Foster contacted the TCEQ Region 2 office on 10/15/09 and indicated that there is no on site manager." No updates made at this time	MIA GONZALES
	PWS ID ASSIGNMENT and ACTIVATION: Request from Rgn 2 Jason Lindeman to assign an	

04 33

10/15/2009	ID to Jaguars Gold Club "Can you please create a PWS ID# for RN105818264, Jaguars Gold Club? This is a TNC system in Lubbock County that was recently discovered. Let me know if you need any additional information. Jason Lindeman" "Here is the information you requested. CN603546185 Ault Properties, Inc. RP contact is Charles Ault, (512) 398-1946, 51 Sunset Ridge Rd, Maxwell, TX 78656 The former on-site manager was murdered in the parking lot a couple of years ago and Mr. Ault didn't know who the actual on-site manager is now. Mr. Ault provided a PWS contact of Brian Foster, 361-779-6996, no address. I've called Mr. Foster a couple of times but haven't been able to reach him and he hasn't returned my calls. I believe he is a regional manager. This is a gentlemen's club that isn't open during the day so I haven't been able to get numbers on the population, but it will be >25 people at least 60 days out of the year. Mr. Ault said that they use bottled water but use the well for ice, bathrooms, and showers. 1 connection 1 ground water well 12913 S US HWY 87, Lubbock, TX 79423 I've attached the LCAD property detail sheet as well as the SoS sheet for Ault Properties." RESEARCH:Added RP Charles Aaron Ault III Director, 51 Sunset Ridge Rd Lubbock TX 78656-4264, bus512-398-1946, other806-748-1916(number listed for club on the website). Added PWS Brian Foster bus361-779-6996. Added EP and Plant. Added 1 cnxn, 30 pop, 1 meter. Physical address is 12913 S US HWY 87 Lubbock TX 79423. LUBBOCK CAD: PropID R128877, Owner Ault Properties Inc, Owner mailing 51 Sunset Ridge Rd Maxwell TX 78656-4264. SOS:Ault Properties Inc, TID 32034310857, In Existence, Director Charles Aaron Ault III.	MIA GONZALES

Occurrences retrieved.

Run Water System Data Sheet Report

No occurrences retrieved.

For questions or comments regarding information on this page, contact the TCEQ iWUD Web Manager

Version V2.2.8

04 34

Public Water Systems Details/Data Sheet for LUBBOCK-COOPER ISD (1520122)

Affiliations | Comments | Samples | Schedules | Fee | Site Visits | Documents
Violations | Sources | Sold Source | Entry Points | Plants

Responsible Party

Organization: **LUBBOCK-COOPER ISD**
Address: **16302 LOOP 493**
LUBBOCK, TX 79423-7805
Individual: **PAT HENDERSON**
Job Title: **SUPERINTENDENT** Phone: **(806) 863-2282**

Occurences were successfully retrieved.

Customers

Reference Number	Name	Role
CN600679054	LUBBOCK-COOPER ISD	OWNER

Properties

CR Regulated Entity Number: **RN101241990**
CCEDS Status: **ACTIVE NOE EXISTS**
Ownership Type: **DISTRICT/AUTHORITY**
System Type: **NON-TRANSIENT/NON-COMMUNITY**
Interconnection: **1**
County: **LUBBOCK (152)**
Region: **LUBBOCK (2)**
All Monitoring Class: **SURFACE WATER - PURCHASED**
Owned Monitoring Class: **GROUNDWATER**
Out of Season:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Customer Groups

Class	Category	Population Count	Connection Count	Meter Count
NON-TRANSIENT	SCHOOL	3000	14	2

Occurrences retrieved.

Capacity

Total Storage:

04 35

Total Storage: **0.045 MG**

Elevated Storage: **0.000 MG**

Pressure Tank Capacity: **0.01120 MG**

Production:

Total Production: **0.216 MGD**

Max Purchased Capacity: **0.050 MGD**

Emergency Production: **0.000 MGD**

Total Service Capacity: **0.000 MGD**

Service Pump Capacity: **0.792 MGD**

Emergency Service Capacity: **0.000 MGD**

Consumption:

Avg Daily Consumption: **0.000 MGD**

Max Daily Consumption: **0.000 MGD**

Activity

Activity Status: **ACTIVE**

Operator Grades

Grade	Total
WATER GRADE D	2

Occurrences retrieved.

Site Visits

Survey Date	Visit Type	Deficiency Score	Inspector
01/20/1999	SURVEY	16	LANCE OWENS
02/06/2001	SURVEY	0	LANCE OWENS
02/28/2002	SURVEY	2	MALCOLM LAING
02/19/2003	SURVEY	0	MALCOLM LAING
09/06/2006	SURVEY MD09/07/2006,RD09/11/2006	0	MALCOLM LAING
10/29/2008	SURVEY MD11/17/2008,RD11/19/2008	0	LANCE OWENS

Site Visit occurrences retrieved.

Comments

Comment Date	Text	Staff Name
06/15/2009	CCI AFFIL REVIEW: PER CCI 10/29/09; Verified RP Superintendent Pat Henderson per website: http://www.lcisd.net/modules/cms/pages.phtml?pageid=5274; Added RP email: path@lcisd.net per website. Verified address: 16302 Loop 493 Lubbock, TX per USPS. Removed PWS Chief Operator:Steven Solas address- it was a duplicate of RP address. Added Steven Solas as EC with EC # 806-863-2282.	DEVON COURTNEY
10/02/2008	The wells that the school was using are emergency just in case the water line that the purchased water from City of Lubbock breaks.	KRISTINE KRIEG

04 36

01/04/2008	Arsenic (1005): System supposedly is no longer arsenic violator. Per Delta sampler Norris Wuensche and operator on site on phone, ISD purchases from Lubbock now and all wells are for non-potable use like irrigation. Purchased SW comes in to same facilities and entry point.	MARIE KNIPFER
03/27/2006	Rec'd return mail FY06 PHS fee----BW	
02/06/2006	POPULATION CHANGED FROM 2150 TO 2686. ALSO ADDRESS CHANGED. SEE FAX FROM SYSTEM-----TC.	SALLY PARAMO
02/02/2006	RECEIVED RETURN MAIL-FY06 PHS FEE---JG	

Occurrences retrieved.

Run Water System Data Sheet Report

Occurrences retrieved.

For questions or comments regarding information on this page, contact the TCEQ iWUD Web Manager

Version V2.2.8

04 37

Public Water Systems Details/Data Sheet for LUBBOCK STOCKYARD (1520242)

Affiliations | Comments | Samples | Schedules | Fee | Site Visits | Documents
Violations | Sources | Sold Source | Entry Points | Plants

Responsible Party

Address: **PO BOX 53199**
LUBBOCK, TX 79453-3199
Individual: **TONY MANN**
Job Title: **OWNER** Phone: **(806) 745-3383**

Occurences were successfully retrieved.

Customers

Reference Number	Name	Role
CN600686745	MANN, TONY	RESPONSIBLE PARTY
CN603598442	LUBBOCK STOCKYARDS INC	OWNER OPERATOR

Properties

CR Regulated Entity Number: **RN101251874**
CCEDS Status: **NO ACTIVE NOE EXISTS**
Ownership Type: **PRIVATE**
System Type: **TRANSIENT/NON-COMMUNITY**
County: **LUBBOCK (152)**
Region: **LUBBOCK (2)**
All Monitoring Class: **GROUNDWATER**
Owned Monitoring Class: **GROUNDWATER**
Out of Season:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Customer Groups

Class	Category	Population Count	Connection Count	Meter Count
TRANSIENT	RESTAURANT	100	3	0

No occurrences retrieved.

Capacity

Total Storage:

Total Storage: ***0.000 MG***

04 38

Elevated Storage: **0.000 MG**

Pressure Tank Capacity: **0.00023 MG**

Production:

Total Production: **0.043 MGD**

Max Purchased Capacity: **0.000 MGD**

Emergency Production: **0.000 MGD**

Total Service Capacity: **0.000 MGD**

Service Pump Capacity: **0.000 MGD**

Emergency Service Capacity: **0.000 MGD**

Consumption:

Avg Daily Consumption: **0.000 MGD**

Max Daily Consumption: **0.000 MGD**

Activity

Activity Status: **ACTIVE**

Site Visits

Survey Date	Visit Type	Deficiency Score	Inspector
11/19/1999	SURVEY	17	LANCE OWENS
12/19/2000	SURVEY	0	LANCE OWENS
12/28/2001	SURVEY	0	KRISTA PERCIVAL
09/08/2004	SURVEY	4	MALCOLM LAING
09/06/2006	SURVEY	0	MALCOLM LAING
11/18/2009	SURVEY MD09/07/2006,RD09/11/2006	11	JASON LINDEMAN

Site Visit occurrences retrieved.

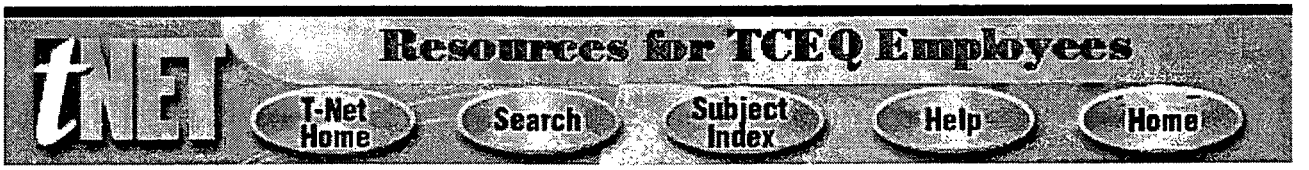
Run Water System Data Sheet Report

No occurrences retrieved.

For questions or comments regarding information on this page, contact the TCEQ iWUD Web Manager

Version V2.2.8

04 39



Public Water Systems Details/Data Sheet for FORT JACKSON MOBILE ESTATES (1520064)

Affiliations Comments Samples Schedules Fee Site Visits Documents
Violations Sources Sold Source Entry Points Plants

Responsible Party

Address: **PO BOX 53733**
LUBBOCK, TX 79453-3733
Individual: **GEORGE W JACKSON**
Job Title: **OWNER** Phone: **(806) 745-2658**

Occurences were successfully retrieved.

Customers

Reference Number	Name	Role
CN601368798	JACKSON, GEORGE W	RESPONSIBLE PARTY

Properties

CR Regulated Entity Number: **RN102698545**
CCEDS Status: **ACTIVE NOE EXISTS**
Ownership Type: **PRIVATE**
System Type: **COMMUNITY**
County: **LUBBOCK (152)**
Region: **LUBBOCK (2)**
All Monitoring Class: **GROUNDWATER**
Owned Monitoring Class: **GROUNDWATER**
Out of Season:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Customer Groups

Class	Category	Population Count	Connection Count	Meter Count
RESIDENTIAL	MOBILE HOME PARK	61	24	1

Occurrences retrieved.

Capacity

Total Storage:

Total Storage: **0.000 MG**
0.000 MG

04 40

Elevated Storage:

Pressure Tank Capacity: **0.00225 MG**

Production:

Total Production: **0.518 MGD**

Max Purchased Capacity: **0.000 MGD**

Emergency Production: **0.000 MGD**

Total Service Capacity: **0.000 MGD**

Service Pump Capacity: **0.000 MGD**

Emergency Service Capacity: **0.000 MGD**

Consumption:

Avg Daily Consumption: **0.000 MGD**

Max Daily Consumption: **0.000 MGD**

Activity

Activity Status: **ACTIVE**

Operator Grades

Grade	Total
WATER GRADE D	1

Occurrences retrieved.

Site Visits

Survey Date	Visit Type	Deficiency Score	Inspector
10/21/1999	SURVEY	14	MALCOLM LAING
10/11/2000	SURVEY	14	MALCOLM LAING
10/02/2001	SURVEY	0	LANCE OWENS
11/07/2003	SURVEY	0	LANCE OWENS
01/31/2006	SURVEY	5	LANCE OWENS
03/14/2008	SURVEY MD03/28/2008,RD04/07/2008	7	MALCOLM LAING

Site Visit occurrences retrieved.

Comments

Comment Date	Text	Staff Name
01/19/2010	RETURNMAIL;FI/NOV,Y,LD02/08/2010,RD03/26/2010,UCLMD REMAIL;DLNOVQ209,N,01/20/10 RETURN MAIL;UAI-DLNOVQ209,Y,LD12/29/09,RD01/15/10,UCLMD. REMAIL:UAI-CCR/NOV12/14/09-TCR/NOV12/08/09,N,01/04/10. Remailed to PO BOX 53733 Lubbock TX 79453-3733 RETURN MAIL:UAI-CCR/NOV,N,LD12/14/09,RD01/04/10,RTS. Yellow label: George W Jackson PO BOX 53733 Lubbock TX 79453-3733	MIA GONZALES
01/04/2010	POCUPDATE;RETURNMAIL; Updated RP Jackson mailing from 2903 76th St Lubbock TX 79423-2109 to PO BOX 53733 Lubbock TX 79453-3733	MIA GONZALES
	RETURN MAIL:TCR/NOV,N,LD12/08/09,RD12/25/09,RTS. Yellow label; PO BOX 53733 Lubbock TX 79453-3733 Called RP George Jackson and left a message 12/30/09	

04 41

12/29/2009	REMAIL:DLNOVQ209,N,12/29/09 REMAIL:CCR/NOV,N,12/14/09 RETURN MAIL:CCR/NOV,Y,LD11/03/09,RD12/11/09,UCLMD RETURN MAIL:DLNOVQ209,Y,LD10/01/09,RD11/20/09,UCLMD. REMAIL:PN/NOV,N,10/12/2009 RETURN MAIL:PN/NOV,Y,LD04/24/2009,RD06/25/2009,UCLMD. AFFIL research not complete. RETURN MAIL:NOV/F,N.LD01/20/2009,RD02/26/2009, UCLMD. AFFIL research not done.	CARMEN CARDENAS
07/15/2008	CCI AFFIL REVIEW: Refer to comments dated 03/04/08 and 04/05/08.	BRAD KING
04/05/2008	RETURN MAIL: NOV-FL, Y, 9/99/99: RETURNED MAIL BUT NO LETTER, TRACKING # IS 7002-2410-0001-7628-9081 AND 7004-1350-0002-7566-2495.	KRISTINE KRIEG
03/04/2008	CCR SNC AFFIL REVIEW: RP George W. Jackson correct as verified by TX Comptroller and Lubbock CAD. Mailing address is to Mr. Jackson's residence 2903 76th St., Lubbock, TX 79423-2109. The physical address for the MHP is 11604 University Ave. 1-34, Lubbock, TX 79423-6542 as verified with CAD, USPS and Google Maps. Physical address is incorrect in CR. RP phone number is correct per whitepages.com. Situation of one owner of the MHP though Jackson lives elsewhere and should be ready for enforcement.	BRAD KING

Occurrences retrieved.

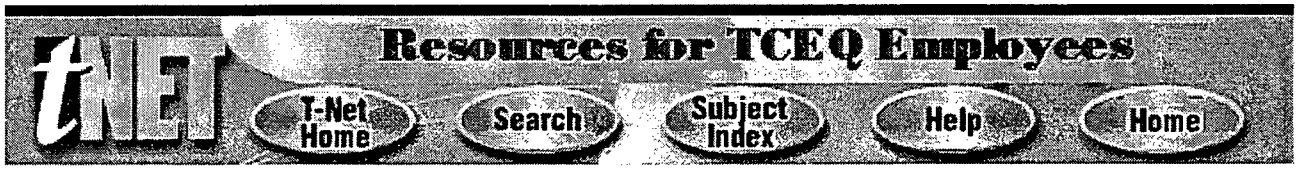
Run Water System Data Sheet Report

Occurrences retrieved.

For questions or comments regarding information on this page, contact the TCEQ iWUD Web Manager

Version V2.2.8

04 42



Public Water Systems Details/Data Sheet for TECH CAFE (1520184)

Affiliations Comments Samples Schedules Fee Site Visits Documents
Violations Sources Sold Source Entry Points Plants

Responsible Party

Address: **5615 84TH ST**
LUBBOCK, TX 79424-4625
Individual: **DIMITRIOUS GEORGOPOULOS**
Job Title: **OWNER** Phone: **(806) 748-1999**

Occurences were successfully retrieved.

Customers

Reference Number	Name	Role
CN603589367	GEORGOPOULOS, DIMITRIOUS	RESPONSIBLE PARTY

Properties

CR Regulated Entity Number: **RN101453561**
CCEDS Status: **ACTIVE NOE EXISTS**
Ownership Type: **PRIVATE**
System Type: **TRANSIENT/NON-COMMUNITY**
County: **LUBBOCK (152)**
Region: **LUBBOCK (2)**
All Monitoring Class: **GROUNDWATER**
Owned Monitoring Class: **GROUNDWATER**
Out of Season:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Customer Groups

Class	Category	Population Count	Connection Count	Meter Count
TRANSIENT	RESTAURANT	100	1	0

No occurrences retrieved.

Capacity

Total Storage:

Total Storage: **0.000 MG**
0.000 MG

04 43

Elevated Storage:

Pressure Tank Capacity: **0.00023 MG**

Production:

Total Production: **0.023 MGD**

Max Purchased Capacity: **0.000 MGD**

Emergency Production: **0.000 MGD**

Total Service Capacity: **0.000 MGD**

Service Pump Capacity: **0.000 MGD**

Emergency Service Capacity: **0.000 MGD**

Consumption:

Avg Daily Consumption: **0.000 MGD**

Max Daily Consumption: **0.000 MGD**

Activity

Activity Status: **ACTIVE**

Site Visits

Survey Date	Visit Type	Deficiency Score	Inspector
10/21/1999	SURVEY	10	MALCOLM LAING
10/24/2000	SURVEY	10	MALCOLM LAING
10/16/2001	SURVEY	0	KRISTA PERCIVAL
08/08/2003	SURVEY	5	LANCE OWENS
09/21/2004	SURVEY	0	LANCE OWENS
02/08/2007	SURVEY MD02/09/2007,RD02/15/2007	0	MALCOLM LAING
02/01/2008	FOCUS	0	MALCOLM LAING
06/24/2008	SURVEY MD08/12/2008,RD08/20/2008	36	JASON LINDEMAN
11/18/2009	SURVEY	11	JASON LINDEMAN

Site Visit occurrences retrieved.

Comments

Comment Date	Text	Staff Name
06/14/2010	RETURNMAIL:TCR/NOE,Y,LD05/07/2010,RD06/11/2010,UCLMD	MIA GONZALES
12/01/2009	Per enforcement review by Sally Paramo for bact violations the mailing address was revised from 11710 South University to 5615 84th St; Lubbock, TX 79424-4625. The original address listed in WUD was not a deliverable address per US Postal. The 84th street address was the mailing address listed in the CAD for this system.	SALLY PARAMO
11/30/2009	CR MIGRATION: RP Georgopoulus mailing 11710 South University Lubbock TX 79423 is not validated by USPS. I called 806-748-1999 and they said the mailing was 11710 South University. Google lists the address for Tech Cafe as 11703 University Ave Lubbock TX 79423. USPA says 11703 University may be undeliverable as well. LUBBOCK CAD: PropID R70921, Owner Dimitrios A Georgopoulos, Owner Address 5615 84th St Lubbock TX 79424-4625, Physical 11703 University Ave 79423.	MIA GONZALES
09/28/2009	PHS FEE coupon submitted providing update address to 11710 University, Lubbock, TX 79423, 806-748-1999. In WUD the RP has been update. The address you provided is not recognized by the US Postal Service as an address we serve. Mail sent to this address may be returned. In Lubbock CAD account P314453, the mailing address 2521 110 th St.,	THERESA CISNEROS

04 44

	Lubbock, TX 79423 is not recongnized by USPS.	
04/22/2009	CO CORE DATA FORM dated Jan 15, 2009. End Date (email to CR) or FO'd the following Previous/Former Owners: John Kiousis (CN603325341), Frances Gotsis (CN603393943), and Chris Marston (CN600754964). Added new owner Dimitrous A Georgopoulos, Bus Ph8067481999 effective date 1/1/2009. RN101453561. Fed Tax ID 75*245*4405. Called to speak with Mr. Georgopoulos but he wasn't in. Expecting return phone call. Updated mailing address from 1628 FM 1585 to 11703 University Aver, Lubbock Tx 79415-2842 per USPS.com. Deleted PWS Contact Jamie Georgopoulos. Have not updated the EC - waiting on return call.	DARLENE TREVILLION
12/10/2008	CCI AFFIL REVIEW: in WUD there are two RP per in Lubbock CAD (Owner ID O0081847) the owners are the estate of Pete Gotsis. No update recommended. See CCI conducted on 6/24/08.	THERESA CISNEROS
12/02/2008	PWSINVEN NAME CHANGE: >>> JLindema 11/21/08 12:27 >>> I received a copy of a + bacti sample for PWS 1520184 that is addressed to Pete's Drive In #4. I conducted a focused investigation on February 1st and a CCI on June 24th and updated the system information to show that the name was now Tech Cafe on both of these. Please let me know if you need additional information. Jason Lindeman Environmental Investigator TCEQ Region 2	MARIE KNIPFER
08/08/2008	NEW OWNERSHIP: Per email dated 02/02/2008 from Jason Linderman to Christine Taylor the "PWS was found operating under new ownership of John Kiousis and with a new name - Tech Cafe. Jason will completed a Core Data Form to establish a CN and update the RN name. Mr. Kiousis said they bought the place at the first of January and started operations on Monday, Jan 28. Jason also stated he would send them a copy of the rules, information on sampling, and a link to our web site. He would also be conducting a CCI out there later this FY." Also, found Tech Cafe is now in CR RN101453561 Comptroller TaxID32007347944. Other restaurants owned by Mr. Kiousis are Tech Cafe, Tech Cafe #2, Tech Cafe #4 and George's Restaurant. I have not changed the name of the PWS - Pending change. Have not received CCI from Mr. Linderman.	DARLENE TREVILLION
01/09/2008	OWNERSHIP changed from Mr. Alexopoulos to Ms. Frances Gotsis. Received letter from Elizabeth Alexopoulos stating she was leasing the property and her last day of business was 12/01/07. She gave the new owners information. Updated WUD to reflect new owner. Sending Ownership Letter with the Data Sheet. See letter from Elizabeth Alexopoulos rec'd 1/9/08----tcisneros	THERESA CISNEROS
12/13/2007	Rec'd phone call from Elizabeth regarding FY08 PHS fee, stating sold system. Will be senting information for the new owner-----tcisneros	THERESA CISNEROS
03/14/2007	Couldn't verify legal ownership (sole proprietor) per CCI Affil Check.	ALLISON MARSHALL
02/08/2007	Updated RP address per yellow label from PHS fee return mail.	THERESA CISNEROS
12/02/2003	OWNERSHIP & ADDRESS CHANGED - NEW OWNER IS PETE ALEXOPULOS AND PREVIOUS OWNER WAS CHRIS MARSTON. INFO VIA PWS FEE.	MIKE LANNEN

Occurrences retrieved.

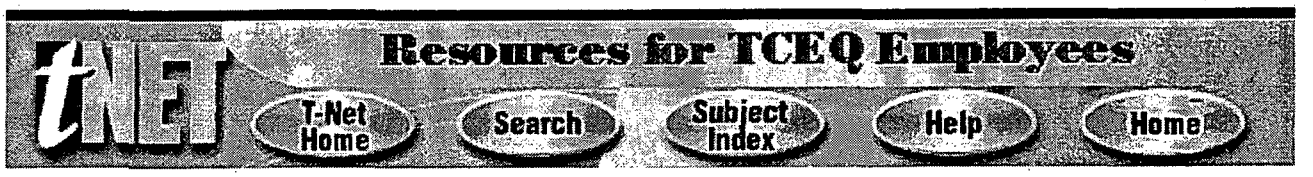
Run Water System Data Sheet Report

No occurrences retrieved.

For questions or comments regarding information on this page, contact the TCEQ iWUD Web Manager

Version V2.2.8

04 45



Public Water Systems Details/Data Sheet for GREEN MOBILE HOME PARK (1520036)

Affiliations Comments Samples Schedules Fee Site Visits Documents
Violations Sources Sold Source Entry Points Plants

Responsible Party

Address: **118 SHERMAN AVE**
LUBBOCK, TX 79415-3608
Individual: **MAZEN BATRICE**
Job Title: **OWNER** Phone: **(806) 765-6223**

Occurences were successfully retrieved.

Customers

Reference Number	Name	Role
CN602885006	BATRICE, MAZEN	RESPONSIBLE PARTY

Properties

CR Regulated Entity Number: **RN101242584**
CCEDS Status: **ACTIVE NOE EXISTS**
Ownership Type: **PRIVATE**
System Type: **COMMUNITY**
County: **LUBBOCK (152)**
Region: **LUBBOCK (2)**
All Monitoring Class: **GROUNDWATER**
Owned Monitoring Class: **GROUNDWATER**
Out of Season:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Customer Groups

Class	Category	Population Count	Connection Count	Meter Count
RESIDENTIAL	MOBILE HOME PARK	50	28	1

Occurrences retrieved.

Capacity

Total Storage:

Total Storage: **0.000 MG**
0.000 MG

04 46

Elevated Storage:

Pressure Tank Capacity: **0.00140 MG**

Production:

Total Production: **0.064 MGD**

Max Purchased Capacity: **0.000 MGD**

Emergency Production: **0.000 MGD**

Total Service Capacity: **0.000 MGD**

Service Pump Capacity: **0.000 MGD**

Emergency Service Capacity: **0.000 MGD**

Consumption:

Avg Daily Consumption: **0.000 MGD**

Max Daily Consumption: **0.000 MGD**

Activity

Activity Status: **ACTIVE**

Operator Grades

Grade	Total
WATER GRADE D	1

Occurrences retrieved.

Site Visits

Survey Date	Visit Type	Deficiency Score	Inspector
04/17/2000	SURVEY	10	LANCE OWENS
04/30/2001	SURVEY	2	ROBERT OZMENT
04/03/2002	SURVEY	4	MALCOLM LAING
04/22/2003	SURVEY	0	MALCOLM LAING
03/09/2005	SURVEY	4	MALCOLM LAING
01/22/2008	SURVEY MD02/02/2009,RD02/06/2009	7	LANCE OWENS

Site Visit occurrences retrieved.

Comments

Comment Date	Text	Staff Name
08/10/2009	08/10/2009 JBolding CCI AFFIL REVIEW: PER CCI <01/22/2009>: Address 118 SHERMAN AVE LUBBOCK TX 79415-3608 good per USPS. Could not verify the owner Mazen Batrice in Lubbock CAD. Searched physical address, 11410 UNIVERSITY AVE LUBBOCK, TX 79423-6023, from CR. Search pulled up mobile homes, but no land. I searched the owner's name, Mazen Batrice, and found some land that seems unrelated to the MHP. Also searched system name Green MHP and found nothing. Left as is for now.	JACOLYN BOLDING
01/18/2008	Enforcement Christopher Keffer needed Mr. Batrice Mazen phone number (he may not have seen cell in iWUD). UPdated to following: " Hi Christopher: I called Mr. Batrice Mazen on his cell 806-438-7070 in WUD it works. He said his new office number is 806-765-6223 daytime. I gave him your information also. 806 745-2963 didn't work. 806 535-1224 2005 CCI number	MARIE KNIPFER

04 47

	didn't work Good luck, Marie	
05/30/2007	Per data update request I added a cell # and updated RP's #. ~DCourtney	MARIE KNIPFER
04/07/2005	SYSTEM NAME CHANGED FROM GREER MOBILE HOME PARK TO GREEN MOBILE HOME PARK. SEE CCI DATED 3/9/05 AND CDF----TC.	
04/05/2005	REC'D FIELD REPORT DATED 1/19/05 WITH NEW OWNER INFORMATION----TC.	
03/23/2004	THE CUSTOMER NAME CHANGED FROM GREER MOBILE HOME PARK TO MACKEY GREER ESTATE. INFO FROM MARILYN QUEREJAZU (CENTRAL REGISTRY). SEE EMAIL DATED 3/12/04---TC.	
01/08/2004	REC'D RETURN MAIL-FY04 FEE-ROUTE TO BE REMAIL TO BRENDA LOGGINS--SR	

Occurrences retrieved.

Run Water System Data Sheet Report

Occurrences retrieved.

For questions or comments regarding information on this page, contact the TCEQ iWUD Web Manager

Version V2.2.8

04 48

Public Water Systems Details/Data Sheet for PRATERS FOODS INC (1520236)

Affiliations | Comments | Samples | Schedules | Fee | Site Visits | Documents
Violations | Sources | Sold Source | Entry Points | Plants

Responsible Party

Organization: **PRATERS FOODS INC**
Address: **2206 114TH ST**
LUBBOCK, TX 79423-7235
Individual: **ARTHUR I CHENOWETH**
Job Title: **PRESIDENT** Phone: **(806) 745-2727**

Occurences were successfully retrieved.

Customers

Reference Number	Name	Role
CN600688865	PRATERS FOODS INC	OWNER OPERATOR
CN603329608	UNITED SUPERMARKETS LLC	OWNER

Properties

CR Regulated Entity Number: **RN101254803**
CCEDS Status: **ACTIVE NOE EXISTS**
Ownership Type: **PRIVATE**
System Type: **TRANSIENT/NON-COMMUNITY**
County: **LUBBOCK (152)**
Region: **LUBBOCK (2)**
All Monitoring Class: **GROUNDWATER**
Owned Monitoring Class: **GROUNDWATER**
Out of Season:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Customer Groups

Class	Category	Population Count	Connection Count	Meter Count
TRANSIENT	INDUSTRIAL/AGRICULTURAL	30	1	1

Occurrences retrieved.

Capacity

Total Storage:

04 49

Total Storage: **0.003 MG**

Elevated Storage: **0.000 MG**

Pressure Tank Capacity: **0.00027 MG**

Production:

Total Production: **0.072 MGD**

Max Purchased Capacity: **0.000 MGD**

Emergency Production: **0.000 MGD**

Total Service Capacity: **0.000 MGD**

Service Pump Capacity: **0.432 MGD**

Emergency Service Capacity: **0.000 MGD**

Consumption:

Avg Daily Consumption: **0.019 MGD**

Max Daily Consumption: **0.000 MGD**

Activity

Activity Status: **ACTIVE**

Operator Grades

Grade	Total
WATER GRADE D	1

Occurrences retrieved.

Site Visits

Survey Date	Visit Type	Deficiency Score	Inspector
02/15/2000	SURVEY	10	LANCE OWENS
02/12/2001	SURVEY	0	LANCE OWENS
02/13/2002	SURVEY	0	LANCE OWENS
09/21/2004	SURVEY	0	LANCE OWENS
12/11/2007	SURVEY MD12/12/2007,RD12/17/2007	0	MALCOLM LAING

Site Visit occurrences retrieved.

Comments

Comment Date	Text	Staff Name
05/30/2008	CCI AFFIL REVIEW: RP Arthur I. Chenoweth - President verified with SOS. 2206 114th St, Lubbock, TX 79423-7235 verified with USPS. (806)745-2727 verified with google search. Recommend no changes.	BRAD KING
02/07/2003	ADDRESS CHANGED-REC'D RETURN MAIL-CALLED SYSTEM FOR NEW ADDRESS. (VICKY)--TC	

Occurrences retrieved.

Run Water System Data Sheet Report

Occurrences retrieved.

04 50

For questions or comments regarding information on this page, contact the TCEQ iWUD Web Manager

Version V2.2.8

04 51

Public Water Systems Details/Data Sheet for 114TH STREET MOBILE HOME PARK (1520067)

Affiliations | Comments | Samples | Schedules | Fee | Site Visits | Documents
Violations | Sources | Sold Source | Entry Points | Plants

Responsible Party

Address: **1818 114TH ST SPC 18**
LUBBOCK, TX 79423-7279
Individual: **PENNY L ADAMS**
Job Title: **OWNER** Phone: **(806) 745-5779**

Address: **1818 114TH ST SPC 16**
LUBBOCK, TX 79423-7279
Individual: **BALDEMAR M REYNA**
Job Title: **OWNER** Phone: **(806) 745-5779**

Occurences were successfully retrieved.

Customers

Reference Number	Name	Role
CN603578782	REYNA, BALDEMAR M	RESPONSIBLE PARTY
CN603463456	ADAMS, PENNY L	RESPONSIBLE PARTY

Properties

CR Regulated Entity Number: **RN102318094**
CCEDS Status: **ACTIVE NOE EXISTS**
Ownership Type: **PRIVATE**
System Type: **COMMUNITY**
County: **LUBBOCK (152)**
Region: **LUBBOCK (2)**
All Monitoring Class: **GROUNDWATER**
Owned Monitoring Class: **GROUNDWATER**
Out of Season:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐

Customer Groups

Class	Category	Population Count	Connection Count	Meter Count
RESIDENTIAL	MOBILE HOME PARK	73	43	2

Occurrences retrieved.

04 52

Capacity

Total Storage:

Total Storage: **0.000 MG**

Elevated Storage: **0.000 MG**

Pressure Tank Capacity: **0.00300 MG**

Production:

Total Production: **0.036 MGD**

Max Purchased Capacity: **0.000 MGD**

Emergency Production: **0.000 MGD**

Total Service Capacity: **0.000 MGD**

Service Pump Capacity: **0.000 MGD**

Emergency Service Capacity: **0.000 MGD**

Consumption:

Avg Daily Consumption: **0.000 MGD**

Max Daily Consumption: **0.000 MGD**

Activity

Activity Status: **ACTIVE**

Operator Grades

Grade	Total
WATER GRADE D	1

Occurrences retrieved.

Site Visits

Survey Date	Visit Type	Deficiency Score	Inspector
11/17/1999	SURVEY	14	LANCE OWENS
11/21/2000	SURVEY	2	KRISTA PERCIVAL
11/15/2001	SURVEY	10	MALCOLM LAING
12/05/2003	SURVEY	2	LANCE OWENS
11/16/2006	SURVEY MD11/22/2006,RD11/28/2006	14	LANCE OWENS
03/18/2009	SURVEY	9	MALCOLM LAING

Site Visit occurrences retrieved.

Comments

Comment Date	Text	Staff Name
03/31/2010	POCUPDATED;PWSREP;PWSINVEN:E-mail from co-owner Penny Adams (padams@lubbockisd.org) "Mrs. Diehl: We have received a letter stating our address is incorrect in your records. Back in December, we (Baldemar and I) went to the local TCEQoffice and spoke with Jason Lindeman, the address was change to the following: Baldemar Reyna & Penny Adams, 1818 114th Space 10, Lubbock, TX 79423. Do not use	

04 53

	Space number 16, as we do not receive mail there. If you need an alternative address, you can use Baldemar Reyna and Penny Adams, PO Box 1213 Brownfield, TX 79316. Thank you, Penny Adams" SDWIS individual records were already correct; added titles. Responded to customer by e-mail. Revised facility names for format.	
03/15/2010	REMAIL:FI/NOE,N,03/16/2010. Addressed to Baldemar M Reyna RETURNMAIL:FI/NOE,Y,LD02/03/2010,RD03/12/2010,UCLMD. Addressed to Baldemar M Reyna RETURNMAIL:FI/NOV,Y,LD01/25/2010,RD03/05/2010,UCLMD RETURNMAIL:FI/NOE,Y,LD02/03/2010,RD03/05/2010,MLNA	MIA GONZALES
12/14/2009	REMAIL:FTR/NOV,N,12/14/09 RETURN MAIL:FTR/NOV,Y,LD10/23/09,RD12/11/09,UCLMD.	MIA GONZALES
10/29/2009	CCI AFFIL REVIEW:Date03/18/2009 FOed RP Penny L Adams, Managing Member, org RA and R Investments LLC to RP Penny L Adams, Owner, no org, same mailing/phone. Added RP Baldemar M Reyna Owner, mailing 1818 114th St Spc 16 Lubbock TX 79423-7279, no phone. Added a second RP because the org has expired and they are both listed in Lubbock CAD. Updated PWS Ballew to EC, ec806-438-7082(cell). Emailed CR to END DATE RA and R Investments LLC because Certificate of Involuntary Termination 07/25/2007 and affiliate Baldemar Reyna and Penny Adams b/c ownership of land. I have probably found the property that the well is on, 1818 114th St Lubbock TX. I believe the whole mobile home park is owned by Adams and Baldemar, b/c they own 10 acres, but I wasn't able to pull up any property by just searching 1818 114th St. LUBBOCK CAD: PropID R90467, Owner Baldemar Reyna and Penny Adams, Physical 1818 114th St Lubbock, Residential Mobile Home, Legal BLK E SEC 10 AB 493 TR C4 C5 & C6 ACS: 10. SOS: RA and R Investments LLC, TID32033186191, Involuntarily Dissolved, Certificate of Involuntary Termination 07/25/2007	MIA GONZALES
06/10/2009	PWS INVEN; THOMAS FORT-COMPUTER PROGRAMMER 5/21/2009 COMPLETE - " John Ballaw (1520067) would like his contact infor changed to : 114th Street Mobile Home Park 1818 114thh St Spc 10 Lubbock, TX." Research/Email Verified address in USPS, updated address to include SPC 10. Added Org. 114th Street Mobile Home Park to PWS John Ballaw.	DEVON COURTNEY
03/18/2008	OWNERSHIP CHANGE: per PHS FY08 Fee received phone call from Penny L. Adams stating purchased system on 06/01/2007. Help Ms. Adams with Core Data Form. While helping Ms. Adams found RA and R Investments LLC, Tax ID 32033186191, in SOS. Status in SOS is involuntarily dissolved, address issue the customer. Ms. Adams will contact SOS to reinstate organization. Update WUD to reflect new owner data. Ms. Adams will fax CDF. Mr. John Ballew will continue submitting bact samples-----tcisneros	THERESA CISNEROS
09/06/2005	OWNERSHIP CHANGED. SEE COMPLIANCE AGREEMENT AND CORE DATA FORM---- TC.	

Occurrences retrieved.

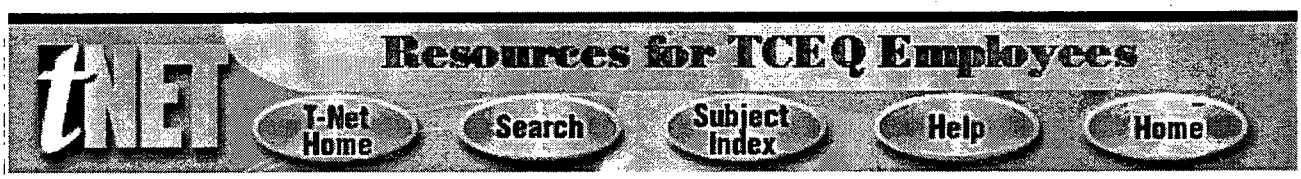
Run Water System Data Sheet Report

Occurrences retrieved.

For questions or comments regarding information on this page, contact the TCEQ iWUD Web Manager

Version V2.2.8

04 54



Public Water Systems Details/Data Sheet for TALENT PLUS (1520243)

Affiliations Comments Samples Schedules Fee Site Visits Documents
Violations Sources Sold Source Entry Points Plants

Responsible Party

Address: **PO BOX 53057**
LUBBOCK, TX 79453-3057
Individual: **WAYNE DOWNING**
Job Title: **OWNER** Phone: **(806) 745-0373**

Occurences were successfully retrieved.

Customers

Reference Number	Name	Role
CN600671432	DOWNING, WAYNE	RESPONSIBLE PARTY

Properties

CR Regulated Entity Number: **RN101231900**
CCEDS Status: **ACTIVE NOE EXISTS**
Ownership Type: **PRIVATE**
System Type: **TRANSIENT/NON-COMMUNITY**
County: **LUBBOCK (152)**
Region: **LUBBOCK (2)**
All Monitoring Class: **GROUNDWATER**
Owned Monitoring Class: **GROUNDWATER**
Out of Season:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Customer Groups

Class	Category	Population Count	Connection Count	Meter Count
TRANSIENT	RECREATION AREA	100	1	1

No occurrences retrieved.

Capacity

Total Storage:

Total Storage: **0.000 MG**
0.000 MG

04 55

Elevated Storage:

Pressure Tank Capacity: **0.00022 MG**

Production:

Total Production: **0.021 MGD**

Max Purchased Capacity: **0.000 MGD**

Emergency Production: **0.000 MGD**

Total Service Capacity: **0.000 MGD**

Service Pump Capacity: **0.000 MGD**

Emergency Service Capacity: **0.000 MGD**

Consumption:

Avg Daily Consumption: **0.000 MGD**

Max Daily Consumption: **0.000 MGD**

Activity

Activity Status: **ACTIVE**

Site Visits

Survey Date	Visit Type	Deficiency Score	Inspector
11/29/1999	SURVEY	12	SUSAN NEWCOMB
11/10/2000	SURVEY	20	MALCOLM LAING
11/20/2001	SURVEY	0	LANCE OWENS
09/21/2004	SURVEY	0	MALCOLM LAING
08/30/2006	SURVEY MD09/01/2006,RD09/11/2006	0	MALCOLM LAING
10/29/2008	SURVEY MD11/17/2008,RD11/21/2008	0	LANCE OWENS

Site Visit occurrences retrieved.

Comments

Comment Date	Text	Staff Name
12/29/2009	REMAIL:PN/NOV,NO3/NOV,N,LD12/29/09 RETURN MAIL:NO3/NOV,Y,LD10/27/09,RD11/20/09,UCLMD. RETURN MAIL:PN/NOV,Y,LD10/29/09,RD11/20/09,UCLMD.	CARMEN CARDENAS
06/10/2009	CCI AFFIL REVIEW: no changes to RP data. Research found in Lubbock CAD (R77352) current owner is DOWNNG WAYNE ESTATES (OO133911) at site address 11713 INDIANA AVE, LUBBOCK, TX 79423, LEGAL DESCIPTION: SPEEDY ACRES L3. Also found owner ID OO109076 at property address 11713 INDIANA AVE the owner name is TALENT PLUS, legal description: FFM&e & VEHICLE. Unable to locate in SOS DOWNING WAYNE ESTATES. Kept Wayne Downing as a sole proprietor.	THERESA CISNEROS
10/26/2006	Wayne Downing (Owner) was called to verify treatment technique. CCI by Malcolm Laing described treatment as "being applied directly into well." Red Weddell explained that this is ok if the technique is liquid chlorine, NOT chlorine tablets.	ALLISON MARSHALL

Occurrences retrieved.

Run Water System Data Sheet Report

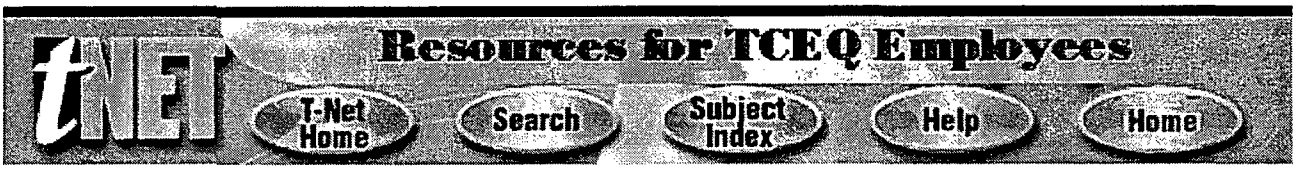
No occurrences retrieved.

04 56

For questions or comments regarding information on this page, contact the TCEQ iWUD Web Manager

Version V2.2.8

04 57



Public Water Systems Details/Data Sheet for ADVENTURES USA (1520163)

Affiliations Comments Samples Schedules Fee Site Visits Documents
Violations Sources Sold Source Entry Points Plants

Responsible Party

Address: **3305 116TH ST**
LUBBOCK, TX 79423-7441
Individual: **KEVIN BAKER**
Job Title: **OWNER** Phone: **(806) 745-3600**

Occurences were successfully retrieved.

Customers

Reference Number	Name	Role
CN600641922	BAKER, KEVIN	RESPONSIBLE PARTY

Properties

CR Regulated Entity Number: **RN101196434**
CCEDS Status: **NO ACTIVE NOE EXISTS**
Ownership Type: **PRIVATE**
System Type: **TRANSIENT/NON-COMMUNITY**
County: **LUBBOCK (152)**
Region: **LUBBOCK (2)**
All Monitoring Class: **GROUNDWATER**
Owned Monitoring Class: **GROUNDWATER**
Out of Season:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Customer Groups

Class	Category	Population Count	Connection Count	Meter Count
TRANSIENT	OTHER TRANSIENT AREA	40	1	1

No occurrences retrieved.

Capacity

Total Storage:

Total Storage: **0.000 MG**
0.000 MG

04 58

Elevated Storage:

Pressure Tank Capacity: **0.00022 MG**

Production:

Total Production: **0.000 MGD**

Max Purchased Capacity: **0.000 MGD**

Emergency Production: **0.000 MGD**

Total Service Capacity: **0.000 MGD**

Service Pump Capacity: **0.000 MGD**

Emergency Service Capacity: **0.000 MGD**

Consumption:

Avg Daily Consumption: **0.000 MGD**

Max Daily Consumption: **0.000 MGD**

Activity

Activity Status: **ACTIVE**

Site Visits

Survey Date	Visit Type	Deficiency Score	Inspector
06/13/2000	SURVEY	10	LANCE OWENS
06/14/2001	SURVEY	0	KRISTA PERCIVAL
10/03/2002	SURVEY	0	LANCE OWENS
10/27/2004	SURVEY	2	LANCE OWENS
02/08/2007	SURVEY MD02/15/2008,RD02/26/2008	4	MALCOLM LAING
11/02/2009	SURVEY	2	MALCOLM LAING

Site Visit occurrences retrieved.

Comments

Comment Date	Text	Staff Name
09/11/2008	CCR AFFIL REVIEW: Verified MAILING ADDRESS 3305 116th St Lubbock, TX 79423-7441 per SOS, Texas Comptrollers, Lubbock CAD and USPS. Verified PHONE # (806)745-3600 per online phone listing and phone call. RN and CN good per CR. Was unable to verify Kevin Baker as the OWNER of Adventures USA and couldn't reach anyone at the phone # given. The regional investigator provides Kevin Baker as the owner. James Drew Baker, listed as manager on CCI, is listed in SOS and Texas Comptrollers as the Registered Agent/Director, but Lubbock CAD only provides Adventures USA as the owner name. Also, it should be noted that Adventures USA, INC has forfeited existence in SOS as of February 2006. RP was already listed as a sole owner KEVEN BAKER, didn't add ADVENTURE USA INC as it is forfeited in SOS. for MKnipfer	BEN NUHN

Occurrences retrieved.

Run Water System Data Sheet Report

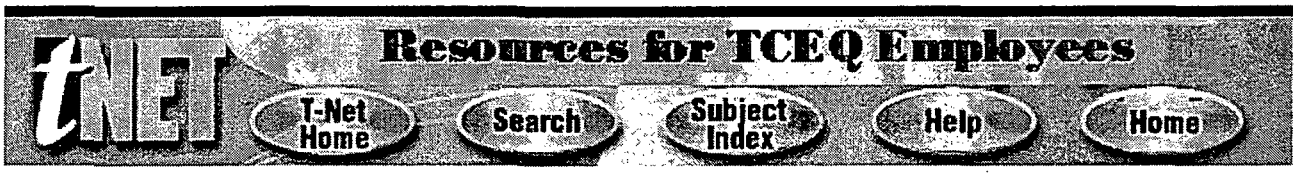
No occurrences retrieved.

04 59

For questions or comments regarding information on this page, contact the TCEQ iWUD Web Manager

Version V2.2.8

04 60



Public Water Systems Details/Data Sheet for STONEGATE GOLF COURSE (1520239)

Affiliations Comments Samples Schedules Fee Site Visits Documents
Violations Sources Sold Source Entry Points Plants

Responsible Party

Organization: **STONEGATE GOLF COURSE LLC**
Address: **11010 INDIANA AVE**
LUBBOCK, TX 79423-5800
Individual: **GLEN REDDELL**
Job Title: **MANAGING MEMBER** Phone: **(806) 748-1448**

Occurences were successfully retrieved.

Customers

Reference Number	Name	Role
CN600639264	STONEGATE GOLF COURSE LLC	RESPONSIBLE PARTY

Properties

CR Regulated Entity Number: **RN101193332**
CCEDS Status: **NO ACTIVE NOE EXISTS**
Ownership Type: **PRIVATE**
System Type: **TRANSIENT/NON-COMMUNITY**
County: **LUBBOCK (152)**
Region: **LUBBOCK (2)**
All Monitoring Class: **GROUNDWATER**
Owned Monitoring Class: **GROUNDWATER**
Out of Season:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Customer Groups

Class	Category	Population Count	Connection Count	Meter Count
TRANSIENT	RECREATION AREA	100	1	0

No occurrences retrieved.

Capacity

Total Storage:

Total Storage: **0.000 MG**

04 61

Elevated Storage: **0.000 MG**

Pressure Tank Capacity: **0.00028 MG**

Production:

Total Production: **0.036 MGD**

Max Purchased Capacity: **0.000 MGD**

Emergency Production: **0.000 MGD**

Total Service Capacity: **0.000 MGD**

Service Pump Capacity: **0.000 MGD**

Emergency Service Capacity: **0.000 MGD**

Consumption:

Avg Daily Consumption: **0.000 MGD**

Max Daily Consumption: **0.000 MGD**

Activity

Activity Status: **ACTIVE**

Site Visits

Survey Date	Visit Type	Deficiency Score	Inspector
09/27/1999	SURVEY	10	SUSAN NEWCOMB
09/01/2000	SURVEY	20	MALCOLM LAING
09/13/2001	SURVEY	0	LANCE OWENS
05/05/2004	SURVEY	0	KRISTA PERCIVAL
11/02/2006	SURVEY MD12/15/2006,RD12/27/2006	12	JASON LINDEMAN
08/12/2008	FOCUS MD08/15/2008,RD08/20/2008	0	LANCE OWENS
01/14/2010	SURVEY	2	MALCOLM LAING

Site Visit occurrences retrieved.

Comments

Comment Date	Text	Staff Name
12/15/2008	CCI AFFIL REVIEW - the organization is STONE GATE GOLF COURSE LLC, found in SOS tax id 17528640844 in existence. The organization was in WUD but not link in Central Registry. Email CR to update or if need to submit a CDF will. Glen Reddell is the managing member----tcisneros	THERESA CISNEROS

Occurrences retrieved.

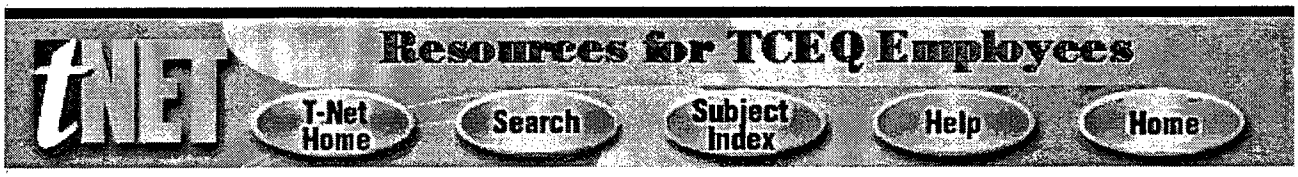
Run Water System Data Sheet Report

No occurrences retrieved.

For questions or comments regarding information on this page, contact the TCEQ iWUD Web Manager

Version V2.2.8

04 62



Public Water Systems Details/Data Sheet for SHORT ROAD WATER SUPPLY (1520147)

Affiliations Comments Samples Schedules Fee Site Visits Documents
Violations Sources Sold Source Entry Points Plants

Responsible Party

Organization: **STRIP PROPERTY LAND AND WATER LLC**
Address: **1426 E 8TH ST**
ODESSA, TX 79761-4803
Individual: **KELLI BURKES**
Job Title: **MANAGER** Phone: **(432) 580-0439**

Occurences were successfully retrieved.

Customers

Reference Number	Name	Role
CN603490814	STRIP PROPERTY LAND AND WATER LLC	OWNER

Properties

CR Regulated Entity Number: **RN102315165**
CCEDS Status: **ACTIVE NOE EXISTS**
Ownership Type: **PRIVATE**
System Type: **NON-TRANSIENT/NON-COMMUNITY**
County: **LUBBOCK (152)**
Region: **LUBBOCK (2)**
All Monitoring Class: **GROUNDWATER**
Owned Monitoring Class: **GROUNDWATER**
Out of Season:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Customer Groups

Class	Category	Population Count	Connection Count	Meter Count
NON-TRANSIENT	OTHER NON-TRANSIENTAREA	100	8	1
TRANSIENT	OTHER TRANSIENT AREA	1000	0	0

No occurrences retrieved.

Capacity

Total Storage:

04 63

Total Storage: **0.000 MG**

Elevated Storage: **0.000 MG**

Pressure Tank Capacity: **0.00025 MG**

Production:

Total Production: **0.057 MGD**

Max Purchased Capacity: **0.000 MGD**

Emergency Production: **0.000 MGD**

Total Service Capacity: **0.000 MGD**

Service Pump Capacity: **0.000 MGD**

Emergency Service Capacity: **0.000 MGD**

Consumption:

Avg Daily Consumption: **0.001 MGD**

Max Daily Consumption: **0.000 MGD**

Activity

Activity Status: **ACTIVE**

Site Visits

Survey Date	Visit Type	Deficiency Score	Inspector
01/12/2000	SURVEY	10	MALCOLM LAING
01/12/2001	SURVEY	0	KRISTA PERCIVAL
01/15/2002	SURVEY	0	KRISTA PERCIVAL
04/06/2004	SURVEY	0	LANCE OWENS
04/20/2007	SURVEY MD05/01/2007,RD05/03/2007	12	LANCE OWENS
03/19/2009	SURVEY MD05/15/2009,RD05/28/2009	10	MALCOLM LAING

Site Visit occurrences retrieved.

Comments

Comment Date	Text	Staff Name
12/11/2009	CCI AFFIL REVIEW:Date03/19/09 See previous comments 06/02/09. Per CCI adding a 2nd Customer Group -TNC, pop1000, cnxns1,meter1.	MIA GONZALES
06/05/2009	CORE DATA FORM REVIEW via Central Registry. Add email address to EC. Updates had already been done. See 6/02/09 comments.	THERESA CISNEROS
06/02/2009	CDF FAX RCVD 5/20/09; Per call to system, spoke to Kelli Burkes - Director of Strip Property Land and Water LLC, I verified that the Ownership of the well & land is in the progress of transferring from Becker Pump & Pipe Co to Strip Property Land and Water LLC. Ms. Burkes stated that Mr. Ben Becker of Becker Pump & Pipe Co, has relinquished all responsibility of the well to Strip Property Land and Water LLC & they are currently in the process of purchasing the land and well from Mr. Becker. Ms. Burkes will be sending in a Bill of Sale once this is complete. I updated Org from Becker Pump & Pipe Co to Strip Property Land and Water LLC per call & CDF. Updated address from PO Box 580 Slaton, TX to 1426 E 8th St Odessa, TX, verified in USPS. Added Kelli Burks as EC with EC # 432-413-9255 (cell). Updated RN / PWS name from Becker Pump & Pipe Water Supply to Short Road Water Supply per CDF. Emailed CR regarding updates.	DEVON COURTNEY
05/20/2009	PHONE CALL from Ms. Kelly Bird stating ownership will change as of May 31, 2009. Will fax CDF to the PDW section. Already had sent CDF to Central Registry.	THERESA CISNEROS

04 64

10/06/2008	CR SYNCHRONIZATION: Change made to implement CR direction on Synchronization Report. Updated to match SOS	DARLENE TREVILLION
07/05/2007	Per Lance Owens - water system provides water for eight liquor stores south of the City of Lubbock on US Hwy 87 which is referred to as "the strip". There are eight connections, one meter and serves approximately 300 employees on "the strip".	MARIE KNIPFER
06/12/2007	Per SOS the correct Org/RP for this system is: Becker Pump & Pipe Co with Ben H Becker SR as Pres. I added begin/end dates and emailed CR. Added tax ID. Verifiied address in USPS, added 4 digit zip. ~DCourtney	MARIE KNIPFER

Occurrences retrieved.

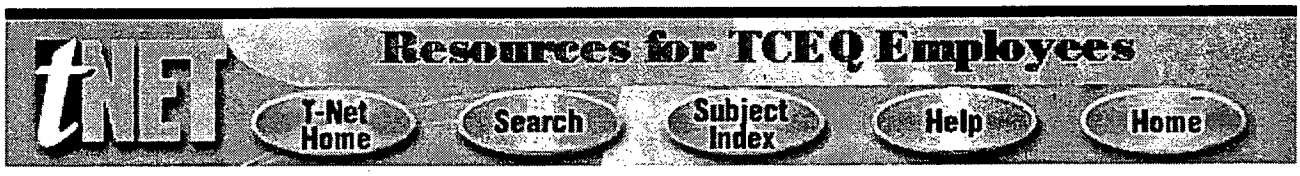
Run Water System Data Sheet Report

No occurrences retrieved.

For questions or comments regarding information on this page, contact the TCEQ iWUD Web Manager

Version V2.2.8

04 65



Public Water Systems Details/Data Sheet for BIG Q MOBILE HOME ESTATES (1520009)

Affiliations Comments Samples Schedules Fee Site Visits Documents
Violations Sources Sold Source Entry Points Plants

Responsible Party

Address: **13010 AVENUE L**
LUBBOCK, TX 79423-5934
Individual: **PAMELA SUE HUGHES**
Job Title: **OWNER** Phone: **(806) 748-1502**

Occurences were successfully retrieved.

Customers

Reference Number	Name	Role
CN602420820	HUGHES, PAMELA SUE	OWNER

Properties

CR Regulated Entity Number: **RN102319464**
CCEDS Status: **ACTIVE NOE EXISTS**
Ownership Type: **PRIVATE**
System Type: **COMMUNITY**
County: **LUBBOCK (152)**
Region: **LUBBOCK (2)**
All Monitoring Class: **GROUNDWATER**
Owned Monitoring Class: **GROUNDWATER**
Out of Season:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Customer Groups

Class	Category	Population Count	Connection Count	Meter Count
RESIDENTIAL	MOBILE HOME PARK	67	35	0

No occurrences retrieved.

Capacity

Total Storage:

Total Storage: **0.014 MG**
0.000 MG

04 66

Elevated Storage:

Pressure Tank Capacity: **0.00100 MG**

Production:

Total Production: **0.057 MGD**

Max Purchased Capacity: **0.000 MGD**

Emergency Production: **0.000 MGD**

Total Service Capacity: **0.000 MGD**

Service Pump Capacity: **0.173 MGD**

Emergency Service Capacity: **0.000 MGD**

Consumption:

Avg Daily Consumption: **0.004 MGD**

Max Daily Consumption: **0.000 MGD**

Activity

Activity Status: **ACTIVE**

Site Visits

Survey Date	Visit Type	Deficiency Score	Inspector
07/11/2000	SURVEY	14	LANCE OWENS
07/25/2001	SURVEY	5	KRISTA PERCIVAL
10/01/2002	SURVEY	0	KRISTA PERCIVAL
11/24/2003	SURVEY	0	KRISTA PERCIVAL
01/26/2005	SURVEY	4	JASON LINDEMAN
07/07/2006	SURVEY MD07/31/2006;RD08/03/2006	16	JASON LINDEMAN
03/10/2008	SURVEY MD03/13/2008,RD03/27/2008	0	MALCOLM LAING
01/21/2010	SURVEY	7	MALCOLM LAING

Site Visit occurrences retrieved.

Comments

Comment Date	Text	Staff Name
06/15/2010	REMAIL:FTR/NOV-PN/NOV,N,06/15/2010 RETURNMAIL:FTR/NOV,Y,LD05/11/2010,RD06/11/2010,UCLMD RETURNMAIL:PN/NOV,Y,LD02/05/2010,RD03/26/2010,UCLMD	MIA GONZALES
12/08/2009	REMAIL:FTR/NOV and DLNOVQ209,N,12/08/09 RETURN MAIL:FTR/NOV,Y,LD10/23/09,RD12/04/09,UCLMD RETURN MAIL:DLNOVQ209,Y,LD10/01/09,RD11/20/09,UCLMD REMAIL:MCL FI/NOE,N,11/02/2009 RETURN MAIL:MCL FI/NOE,Y,LD09/23/2009,RD10/26/2009,UCLMD. REMAIL:FI/NOV,N,09/25/2009 REMAIL:FTR/NOV,N,12/08/09 RETURN MAIL:FI/NOV,Y,LD09/02/2009,RD09/24/2009,UCLMD REMAIL:FTR/NOV,N,09/04/2009 RETURN MAIL:FTR/NOV,Y,LD07/27/2009,RD08/25/2009,UCLMD. REMAIL:DLQOR4/NOV,N,06/12/2009 RETURN MAIL:DLQOR4/NOV,Y,LD003/27/2009,RD04/30/2009,UCLMD.	MIA GONZALES
07/08/2008	CCI AFFIL REVIEW: RP Pamela Sue Hughes - Owner, 13010 Avenue L, Lubbock, TX 79423-5934, (806)748-1502 verified with TX Comptroller, USPS and Google. Recommend end dating BRAND, DONALD W CN601225527. HUGHES, PAMELA SUE CN602420820 should be the only entity affiliated with this PWS.	BRAD KING
05/27/2006	OWNERSHIP CHANGED FROM DONALD BRAND (DECEASED) TO PAMELA S. HUGHES.	THERESA

SEE PWS MAILING CONTACT UPDATE FORM REC'D 3/30/06----TC. CISNEROS

Occurrences retrieved.

Run Water System Data Sheet Report

No occurrences retrieved.

For questions or comments regarding information on this page, contact the TCEQ iWUD Web Manager

Version V2.2.8

04 68

Public Water Systems Details/Data Sheet for WHORTON MOBILE HOME PARK (1520149)

Affiliations | Comments | Samples | Schedules | Fee | Site Visits | Documents
Violations | Sources | Sold Source | Entry Points | Plants

Responsible Party

Address: **128 E 86TH ST**
LUBBOCK, TX 79404-7810
Individual: **BARBARA WHORTON**
Job Title: **OWNER** Phone: **(806) 745-3829**

Occurences were successfully retrieved.

Customers

Reference Number	Name	Role
CN600701676	WHORTON, BARBARA	RESPONSIBLE PARTY

Properties

CR Regulated Entity Number: **RN101272573**
CCEDS Status: **ACTIVE NOE EXISTS**
Ownership Type: **PRIVATE**
System Type: **COMMUNITY**
County: **LUBBOCK (152)**
Region: **LUBBOCK (2)**
All Monitoring Class: **GROUNDWATER**
Owned Monitoring Class: **GROUNDWATER**
Out of Season:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Customer Groups

Class	Category	Population Count	Connection Count	Meter Count
RESIDENTIAL	MOBILE HOME PARK	60	26	2

Occurrences retrieved.

Capacity

Total Storage:

Total Storage: **0.000 MG**
0.000 MG

04 69

Elevated Storage:

Pressure Tank Capacity: **0.00139 MG**

Production:

Total Production: **0.072 MGD**

Max Purchased Capacity: **0.000 MGD**

Emergency Production: **0.000 MGD**

Total Service Capacity: **0.000 MGD**

Service Pump Capacity: **0.000 MGD**

Emergency Service Capacity: **0.000 MGD**

Consumption:

Avg Daily Consumption: **0.002 MGD**

Max Daily Consumption: **0.000 MGD**

Activity

Activity Status: **ACTIVE**

Operator Grades

Grade	Total
WATER GRADE B GROUND	1

Occurrences retrieved.

Site Visits

Survey Date	Visit Type	Deficiency Score	Inspector
02/08/1999	SURVEY	14	LANCE OWENS
02/08/2002	SURVEY	0	LANCE OWENS
05/11/2004	SURVEY	2	LANCE OWENS
05/24/2007	SURVEY MD06/19/2007,RD06/21/2007	0	LANCE OWENS
11/30/2009	SURVEY	11	MALCOLM LAING

Site Visit occurrences retrieved.

Comments

Comment Date	Text	Staff Name
03/24/2010	POCUPDATED;DWQ;PWSINVEN: Kimberly Horndeski,RD03/24/10 "I have some information on the system WHORTON MOBILE HOME PARK (1520149). The only person to contact that is currently listed is BARBARA WHORTON but she is a bit older and is having some difficulties so she asks her son Mel Boldes to handle the documents and so forth for the system. I was wondering if it would be possible to add him as an emergency contact or whatnot if that would be helpful. His phone number is 806.798.0657" RESEARCH: Per request added PWS Mel Boldes, bus806-798-0657	MIA GONZALES
03/08/2010	RETURNMAIL:As/NOV,Y,LD02/01/2010,RD03/05/2010,UCLMD	MIA GONZALES
01/09/2009	RETURN MAIL:NOV/F,Y,LD11/07/2006,RD00/00/0000,UCLMD. AFFIL research not done. RP and address are still the same 128 E 86TH ST.	MIA GONZALES

04 70

01/08/2009	RETURN MAIL:NOV/As,Y,LD07/24/2008,RD09/09/2008,UCLMD. AFFIL research not completed.	MIA GONZALES
09/06/2007	Verified RP/Org per CCI/CAD. Verified address per USPS. ~Dcourtney	MARIE KNIPFER
03/04/2003	Per Lance Owens Reg 2 - this system clearly has had two entry points EP001 and EP002 for years. We did not catch EP002 in WUD. We have been scheduling and sampling only EP001 for a while for fluoride primary MCL. The system (Barbara Whorton) makes RO available on distribution. I created a fake entry point 003 in order to monitor this RO water. In 2003, we will schedule EP001, EP002, EP003 for quarterly fluoride monitoring.	MARIE KNIPFER

Occurrences retrieved.

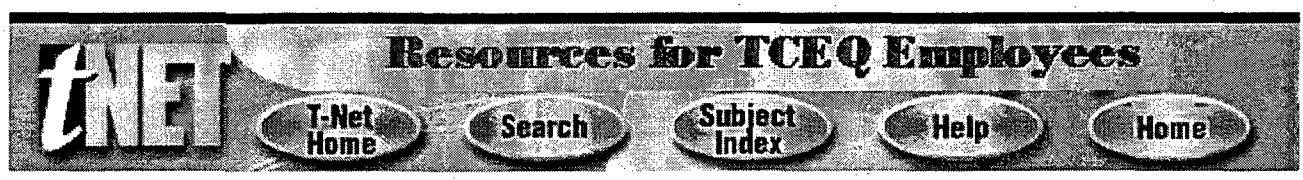
Run Water System Data Sheet Report

Occurrences retrieved.

For questions or comments regarding information on this page, contact the TCEQ iWUD Web Manager

Version V2.2.8

04 71



Public Water Systems Details/Data Sheet for TERRELLS MOBILE HOME PARK (1520192)

Affiliations Comments Samples Schedules Fee Site Visits Documents
Violations Sources Sold Source Entry Points Plants

Responsible Party

Address: **312 E 82ND ST UNIT 24**
LUBBOCK, TX 79404-7012
Individual: **DEBRA BELL**
Job Title: **OWNER** Phone: **(806) 787-9641**

Occurences were successfully retrieved.

Customers

Reference Number	Name	Role
CN601653926	DEBRA BELL	RESPONSIBLE PARTY

Properties

CR Regulated Entity Number: **RN101249852**
CCEDS Status: **ACTIVE NOE EXISTS**
Ownership Type: **PRIVATE**
System Type: **COMMUNITY**
County: **LUBBOCK (152)**
Region: **LUBBOCK (2)**
All Monitoring Class: **GROUNDWATER**
Owned Monitoring Class: **GROUNDWATER**
Out of Season:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Customer Groups

Class	Category	Population Count	Connection Count	Meter Count
RESIDENTIAL	MOBILE HOME PARK	50	24	1

Occurrences retrieved.

Capacity

Total Storage:

Total Storage: **0.000 MG**
0.000 MG

04 72

Elevated Storage:

Pressure Tank Capacity: **0.00131 MG**

Production:

Total Production: **0.050 MGD**

Max Purchased Capacity: **0.000 MGD**

Emergency Production: **0.000 MGD**

Total Service Capacity: **0.000 MGD**

Service Pump Capacity: **0.000 MGD**

Emergency Service Capacity: **0.000 MGD**

Consumption:

Avg Daily Consumption: **0.000 MGD**

Max Daily Consumption: **0.000 MGD**

Activity

Activity Status: **ACTIVE**

Operator Grades

Grade	Total
WATER GRADE B GROUND	1

Occurrences retrieved.

Site Visits

Survey Date	Visit Type	Deficiency Score	Inspector
03/20/2000	SURVEY	17	SUSAN NEWCOMB
03/21/2001	SURVEY	12	KRISTA PERCIVAL
03/14/2002	SURVEY	4	KRISTA PERCIVAL
04/17/2003	SURVEY	7	LANCE OWENS
02/08/2005	SURVEY	4	LANCE OWENS
04/24/2007	SURVEY MD05/04/2007,RD05/14/2007	9	LANCE OWENS
01/23/2009	SURVEY MD01/30/2009,RD02/06/2009	4	MALCOLM LAING

Site Visit occurrences retrieved.

Comments

Comment Date	Text	Staff Name
08/10/2009	08/10/2009 JBolding CCI AFFIL REVIEW: PER CCI <01/23/2009>: Address 312 E 82ND ST UNIT 24 LUBBOCK TX 79404-7012 is good per USPS. Per Lubbock CAD, Arlin Terrell used to own the land, but it is now owned by Debra Bell.	JACOLYN BOLDING
05/15/2009	Debra Bell sent in a progress report to comply with the compliance agreement. The nearest system is the City of Lubbock and they will not agree to sell water to Terrells MHP because the buildings are outside the city limit.	KRISTINE KRIEG
11/07/2008	Update RP Debra Bell phone from 806-745-8930 to 806-787-9641 per Mr. Arlin Terrell (806-789-7128). Per call to system, Debra Bell is the RP/sole proprietor of this system. Debra is Arlin	THERESA CISNEROS

06/14/2007	Terrell and Alan Terrell's sister--they are the former owners per CAD. Updated phone per CCI report. Verified mailing address per USPS. Emailed CR regarding multiple CNs. ~DCourtney	MARIE KNIPFER
02/22/2005	Co-Owner changed from ARLIN TERRELL to DEBRA BELL, as well as change of address unit and phone number.---SJM	
07/14/2003	CHANGE OF OWNERSHIP FROM JOHN TERRELL TO ARLIN TERRELL, ALLAN TERRELL & DEBRA BELL.	LANCE OWENS

Occurrences retrieved.

Run Water System Data Sheet Report

Occurrences retrieved.

For questions or comments regarding information on this page, contact the TCEQ iWUD Web Manager

Version V2.2.8

04 74

REFERENCE 5

Attention Owner: /Confidentiality Privilege Notice on reverse side of owner's copy.

Texas Department of License and Regulation

Water Well Driller/Pump Installer Program
P.O. Box 12157 Austin, Texas 78711 (512) 463-7880 FAX (512) 463-8616
Toll free (800) 803-9202
Email address: water.well@license.state.tx.us

This form must be completed and filed with the department and owner within 60 days upon completion of the well.

WELL REPORT

A WELL IDENTIFICATION AND LOCATION DATA

1) OWNER

Name	Address	City	State	Zip
LYNN ZICKEFOOSE	P.O. BOX 6824	LUBBOCK	TX	79493

2) WELL LOCATION Lot # 10

County	Physical Address	City	State	Zip
LUBBOCK 152	FM 1585 Windmill Estates	LUBBOCK	TX	79423

3) Type of Work
☑ New Well ☐ Deepening ☐ Reconditioning

Lat. 33 | 28 | 65N **Long.** 101 | 51 | 16W **Grid #** 23 34-1

4) Proposed Use (check) ☐ Monitor ☐ Environmental Soil Boring ☑ Domestic ☐ Industrial ☐ Irrigation ☐ Injection ☐ Public Supply ☐ De-watering ☐ Testwell
If Public Supply well, were plans submitted to the TNRCC? ☐ Yes ☐ No

5) N↑

6) Drilling Date
Started 1-13-01
Completed 1-13-01

Diameter of Hole

Dia. (in)	From (ft)	To (ft)
8 ¾	0	177

7) Drilling Method (check) ☐ Driven ☐ Air Rotary ☑ Mud Rotary ☐ Bored ☐ Air Hammer ☐ Cable Tool ☐ Jetted ☐ Other

From (ft)	To (ft)	Description and color of formation material
0	3	TOP SOIL
3	6	CALICHIE
6	30	SANDY CLAY
30	40	SAND
40	50	SAND STONE
50	65	SAND & SAND STONE
65	75	SAND
75	80	SAND STONE
80	90	SAND & SAND STONE
90	95	SAND & SAND STONE & TAN CLAY
95	148	SAND & GRAVEL
148	160	BROWN CLAY

(Use reverse side of Well Owner's copy, If necessary)

8) Borehole Completion ☐ Open Hole ☐ Straight Wall ☐ Under-reamed ☑ Gravel Packed ☐ Other
If Gravel Packed give the interval from 90 ft. to 177 ft.

Casing, Blank Pipe, and Well Screen Data

Dia. (in.)	New Or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft) From	Setting (ft) To	Gage Casing Screen
5	N	PVC PLAIN	0	135	
5	N	PVC PERF	135	177	

9) Cementing Data
Cementing from 2 ft. to 90 ft. # of sacks used 12
ft. to ft. # of sacks used
Method Used
Cementing By JIMMY KENNEDY
Distance to septic system field or other concentrated contamination ft.
Method of verification of above distance

13) Plugged ☐ Well plugged within 48 hours

Casing left in well:

From (ft)	To (ft)

Cement/Bentonite placed in well:

From (ft)	To (ft)	Sacks used
N\A		

10) Surface Completion
☐ Specified Surface Slab Installed
☐ Specified Surface Sleeve Installed
☑ Pitless Adapter Used
☐ Approved Alternative Procedure Used

RECEIVED
NOV 22 2004
TCEQ CENTRAL FILE ROOM

14) Typepump
☐ Turbine ☐ Jet ☑ Submersible ☐ Cylinder ☐ Other
Depth to pump bowls, cylinder, jet, etc., 176 ft.

11) Water Level
Static level 143 ft. below Date 1-13-01
Artesian Flow gpm Date
SFO

15) Water Test
Typetest ☑ Pump ☐ Bailer ☐ Jetted ☐ Estimated
Yield: gpm with - ft. drawdown after ½ hrs.

12) Packers

Type	Depth
DESC CO	N/A

16) Water Quality
Did you knowingly penetrate any strata which contain undesirable constituents? WP #
☐ Yes ☑ NO If yes, did you submit a REPORT OF UNDESIRABLE WATER?
Type of water Depth of Strata
Was a chemical analysis made? ☐ Yes ☑ No

MAR 05 2001
COMMENT

Company or Individual's Name (type or print) ESTILL DRILLING

Address P.O. BOX 683 City BROWNFIELD State TX Zip 79316

Signature W A Burton Estill — Licensed Driller/Pump Installer — 1 / 13 / 01 Date

Signature — Apprentice — / / Date

TDLR FORM 004WWD Copies to TDLR - Owner - Driller/Pump Installer

05 01

Attention Owner: Confidentiality Privilege Notice on reverse side of owner's copy.

Texas Department of License and Regulation

Water Well Driller/Pump Installer Program
P.O. Box 12157 Austin, Texas 78711 (512)463-7880 FAX (512)463-8616
Toll free (800)803-9202
Email address: water.well@license.state.tx.us

This form must be completed and filed with the department and owner within 60 days upon completion of the well.

WELL REPORT

Name	Address	City	State	Zip
Lynn Zickefoose	PO Box 6824	Lubbock	Tx	79493

County	Physical Address	City	State	Zip
Lubbock 152	#12 Windmill Estates FM 835	Lubbock	Tx	79493

Lat. 33 | 28163 Long. 101 51 14 Grid # 23-34-1

3) Type of Work
☑ New Well ☐ Deepening ☐ Reconditioning

4) Proposed Use (check) ☐ Monitor ☐ Environmental Soil Boring ☑ Domestic ☐ Industrial ☐ Irrigation ☐ Injection ☐ Public Supply ☐ De-watering ☐ Testwell
If Public Supply well, were plans submitted to the TNRCC? ☐ Yes ☐ No

5) N↑

6) Drilling Date
Started 1/20/01
Completed 1/20/01

Diameter of Hole

Dia.(in)	From (ft)	To (ft)
8 3/4	0	190

7) Drilling Method (check) ☐ Driven ☐ Air Rotary ☑ Mud Rotary ☐ Bored ☐ Air Hammer ☐ Cable Tool ☐ Jetted ☐ Other

From (ft)	To (ft)	Description and color of formation material
1	3	Top Soil
3	30	Sandy Clay
30	40	Sand, Loose
40	43	Sand stone
43	60	Sand & Sand stone
60 -	76	Sand, Loose
76	90	Sand & Sand stone
90	100	Sand & Tan Clay
100	150	Sand & Gravel
150	161	Brown Clay

(Use reverse side of Well Owner's copy, If necessary)

8) Borehole Completion ☐ Open Hole ☐ Straight Wall ☐ Under-reamed ☑ Gravel Packed ☐ Other
If Gravel Packed give the interval from 40 ft. to 190 ft.

Casing, Blank Pipe, and Well Screen Data

Dia. (in.)	New Or Used	Steel, Plastic, etc. Perf., Slotted, etc Screen Mfg., if commercial	Setting (ft) From	Setting (ft) To	Gage Casing	Gage Screen
5"	N	P.V.C	0	190		
5"	N	P.V.C Perf.	150	190		

9) Cementing Data
Cementing from 0 ft. to 80 ft. # of sacks used 12
_____ ft. to _____ ft. # of sacks used _____
Method Used _____
Cementing By Tom Kennedy
Distance to septic system field or other concentrated contamination _____ ft.
Method of verification of above distance _____

13) Plugged ☐ Well plugged within 48 hours

Casing left in well: From (ft)	To (ft)	Cement/Bentonite placed in well: From (ft)	To (ft)	Sacks used
		N-A		

10) Surface Completion
☐ Specified Surface Slab Installed
☐ Specified Surface Sleeve Installed
☑ Pitless Adapter Used
☐ Approved Alternative Procedure Used

NOV 22 2004
GEO - CENTRAL FILE ROOM

14) Typepump
☐ Turbine ☐ Jet ☑ Submersible ☐ Cylinder
☐ Other _____
Depth to pump bowls, cylinder, jet etc. 186 ft.

11) Water Level
Static level 145 ft. below ☐ Date
Artesian Flow ☐ gpm. Date

15) Water Test
Typetest ☑ Pump ☐ Bailer ☐ Jetted ☐ Estimated
Yield: 14 gpm with — ft. drawdown after 1/2 hrs.

12) Packers

Type	Depth
N. A.	

16) Water Quality
Did you knowingly penetrate and strata which contain undesirable constituents.
☐ YES ☑ NO If yes, did you submit a REPORT OF UNDESIRABLE WATER
Type of water _____ Depth of Strata _____
Was a chemical analysis made ☐ Yes ☑ No

EXP # MAR 05 2001
DESC CO
COMMENT

Company or individual's Name (type or print)	Estill Drilling	2329 WI
Address PO Box 683 Lubbock Hwy	City Brownfield	State Tx Zip 79316
Signature W. A. Buster Estill	/ /	Signature / /

TDLR FORM 001WWD White - TDLR Yellow - Owner Pink - Driller/Pump Installer

05 02

Attention Owner: Confidentiality Privilege Notice on reverse side of owner's copy.

Texas Department of License and Regulation

Water Well Driller/Pump Installer Program
P.O. Box 12157 Austin, Texas 78711 (512)463-7880 FAX (512)463-8616
Toll free (800)803-9202
Email address: water.well@license.state.tx.us

This form must be completed and filed with the department and owner within 60 days upon completion of the well.

WELL REPORT

Name	Address	City	State	Zip
Lynn Lickafoose	P.O Box 6824	Lubbock	Tx	79493

County	Physical Address	City	State	Zip
Lubbock 152	Lot 13 Windmill Estates East	Lubbock	TEXAS	79493

3) Type of Work
☑ New Well ☐ Deepening ☐ Reconditioning

Lat. 33 | 28 | 62 Long. 101 | 51 | 06 Grid # 23-34-1

4) Proposed Use (check) ☐ Monitor ☐ Environmental Soil Boring ☑ Domestic ☐ Industrial ☐ Irrigation ☐ Injection ☐ Public Supply ☐ De-watering ☐ Testwell
If Public Supply well, were plans submitted to the TNRCC? ☐ Yes ☐ No

5) N↑

6) Drilling Date
Started 1 / 22 / 01
Completed 1 / 22 / 01

Diameter of Hole

Dia.(in)	From (ft)	To (ft)
8¾	0	190

7) Drilling Method (check) ☐ Driven ☐ Air Rotary ☑ Mud Rotary ☐ Bored ☐ Air Hammer ☐ Cable Tool ☐ Jetted ☐ Other

From (ft)	To (ft)	Description and color of formation material
1 -	3	Top Soil
3 -	6	Caliche
6 -	30	Sandy Clay
30 -	40	SAND
40 -	50	SAND stone
50 -	75	SAND
75 -	100	SAND Stone SAN Clay
100 -	140	SAND + Gravel
140 -	148	SAND + Gravel - TAN Clay
148 -	170	Brown Clay

(Use reverse side of Well Owner's copy, If necessary)

8) Borehole Completion ☐ Open Hole ☐ Straight Wall ☐ Under-reamed ☑ Gravel Packed ☐ Other
If Gravel Packed give the interval from 90 ft. to 190 ft.

Casing, Blank Pipe, and Well Screen Data

Dia. (in.)	New Or Used	Steel, Plastic, etc. Perf., Slotted, etc Screen Mfg., if commercial	Setting (ft) From	Setting (ft) To	Gage Casing Screen
5	N	PVC	0	190	
5	N	PVC Perf	150	190	

9) Cementing Data
Cementing from 0 ft. to 80 ft. # of sacks used 12
ft. to ft. # of sacks used
Method Used
Cementing By Jim Kennedy
Distance to septic system field or other concentrated contamination ft
Method of verification of above distance

10) Surface Completion
☐ Specified Surface Slab Installed
☐ Specified Surface Sleeve Installed
☑ Pitless Adapter Used
☐ Approved Alternative Procedure Used

NOV 2 2 2004
TCEQ - CENTRAL FILE ROOM

11) Water Level
Static level 145 ft. below Date 1 / 22 / 01
Artesian Flow gpm. Date / /

12) Packers Type Depth
N - A

13) Plugged ☐ Well plugged within 48 hours
Casing left in well: Cement/Bentonite placed in well:

From (ft)	To (ft)	From (ft)	To (ft)	Sacks used
		N - A		

14) Typepump
☐ Turbine ☐ Jet ☑ Submersible ☐ Cylinder
☐ Other
Depth to pump bowls, cylinder, jet etc. 166 ft.

15) Water Test
Typetest ☑ Pump ☐ Bailer ☐ Jetted ☐ Estimated
Yield: 16 gpm with ← ft. drawdown after 3 hrs.

16) Water Quality GWP #
Did you knowingly penetrate and strata which contain undesirable constituents.
☐ YES ☑ NO If yes, did you submit a REPORT OF UNDESIRABLE WATER
Type of water Depth of Strata
Was a chemical analysis made ☐ Yes ☑ No

MAR 05 2001
COMMENT

Company or individual's Name (type or print)	Estill Drilling 2329 W.I			
Address P.O Box 683 Lubbock Hwy	City Brownfield	State TEXAS	Zip 79316	
Signature A Buster Estill	1 / 22 / 01	Signature	/ /	

TDLR FORM 001WWD *White - TDLR* *Yellow - Owner* *Pink - Driller/Pump Installer*

05 03

Attention Owner: Confidentiality Privilege Notice on reverse side of owner's copy.

Texas Department of License and Regulation

Water Well Driller/Pump Installer Program
P.O. Box 12157 Austin, Texas 78711 (512)463-7880 FAX (512)463-8616
Toll free (800)803-9202
Email address: water.well@license.state.tx.us

This form must be completed and filed with the department and owner within 60 days upon completion of the well.

WELL REPORT

Name	Address	City	State	Zip
Lynn Dickerson	P.O Box 6824	Lubbock	Tex	79493

County	Physical Address	City	State	Zip
Lubbock 152	Windmill Estates East FM 1585	Lubbock	Tex	79493

Lat. 33 | 28 | 65 Long. 101 | 51 | 12 W. Grid # 23-34-1

3) Type of Work
☑ New Well ☐ Deepening ☐ Reconditioning

4) Proposed Use (check) ☐ Monitor ☐ Environmental Soil Boring ☑ Domestic ☐ Industrial ☐ Irrigation ☐ Injection ☐ Public Supply ☐ De-watering ☐ Testwell
If Public Supply well, were plans submitted to the TNRCC? ☐ Yes ☐ No

5) N↑

6) Drilling Date
Started 1 / 19 / 01
Completed 1 / 19 / 01

Diameter of Hole

Dia.(in)	From (ft)	To (ft)
8 3/4"	0	186

7) Drilling Method (check) ☐ Driven ☐ Air Rotary ☑ Mud Rotary ☐ Bored ☐ Air Hammer ☐ Cable Tool ☐ Jetted ☐ Other

From (ft)	To (ft)	Description and color of formation material
1 -	3	Top - Soil
3 -	30	SANDY CLAY
30 -	40	SAND Loose
40 -	59	SAND + SANDSTONE
59 -	80	SAND STONE
80 -	90	SAND
90 -	98	SAND + Tan Clay
98 -	130	SAND + Gravel
130 -	138	SAND + Brown CLAY
138 -	150	SAND + Gravel

(Use reverse side of Well Owner's copy, If necessary)

8) Borehole Completion ☐ Open Hole ☐ Straight Wall ☐ Under-reamed ☑ Gravel Packed ☐ Other
If Gravel Packed give the interval from 100 ft. to 186 ft.

Casing, Blank Pipe, and Well Screen Data

Dia. (in.)	New Or Used	Steel, Plastic, etc. Perf., Slotted, etc Screen Mfg., if commercial	Setting (ft) From	Setting (ft) To	Gage Casing	Gage Screen
5"	N	PVC	0	186		
5	N	PVC Perf	146	186		

9) Cementing Data
Cementing from 0 ft. to 100 ft. # of sacks used 12
ft. to ft. # of sacks used
Method Used
Cementing By Jim Kennedy
Distance to septic system field or other concentrated contamination ft.
Method of verification of above distance

13) Plugged ☐ Well plugged within 48 hours
Casing left in well: Cement/Bentonite placed in well:

From (ft)	To (ft)	From (ft)	To (ft)	Sacks used
	N - A			

10) Surface Completion
☐ Specified Surface Slab Installed
☐ Specified Surface Sleeve Installed
☑ Pitless Adapter Used
☐ Approved Alternative Procedure Used

RECEIVED NOV 22 2004 TCEQ - REAL FILE ROOM

14) Typepump
☐ Turbine ☐ Jet ☑ Submersible ☐ Cylinder ☐ Other
Depth to pump bowls, cylinder, jet etc., 180 ft.

11) Water Level
Static level 4 ft. below Date 1/19/01
Artesian Flow gpm. Date

15) Water Test
Typetest ☐ Pump ☐ Bailer ☐ Jetted ☐ Estimated
Yield: 16 gpm with — ft. drawdown after 1 hrs.

16) Water Quality
Did you knowingly penetrate and strata which contain undesirable constituents.
☐ YES ☑ NO If yes, did you submit a REPORT OF UNDESIRABLE WATER
Type of water Depth of Strata
Was a chemical analysis made ☐ Yes ☑ No

SMP # MAR 05 2001 COMPLT DESC CD

12) Packers

Type	Depth
N - A	

Company or individual's Name (type or print)	Est. II Drilling	2329 WI
Address P.O Box 683 Lubbock Hwy	City Brownfield	State TEXAS Zip 79316
Signature W A Bush Estell	1 / 19 / 01	Signature / /

TDLR FORM 001WWD *White - TDLR* *Yellow - Owner* *Pink - Driller/Pump Installer*

05 04

Send original copy by certified return receipt requested mail to: TDLR, P.O. Box 12157, Austin, TX 78711

ATTENTION OWNER: *Confidentiality Privilege Notice on reverse side of Well Owner's copy*

State of Texas WELL REPORT

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
512-463-7880

1) OWNER (Name) **Double T Liquor Store** ADDRESS (Street or RFD) **1585 and Hwy 87** **Lubbock** (City) **TX** (State) **79401** (Zip)

2) ADDRESS OF WELL: County **Lubbock** (Street, RFD or other) (City) (State) (Zip) Long. **101 50.64** Lat. **33 28.58** GRID # **23-34-1**

3) TYPE OF WORK (Check): ☑ New Well ☐ Deepening ☐ Reconditioning ☐ Plugging

4) PROPOSED USE (Check): ☐ Monitor ☐ Environmental Soil Boding ☐ Domestic ☐ Industrial ☐ Irrigation ☐ Injection ☑ Public Supply ☐ De-watering ☐ Testwell
If Public Supply well, were plans submitted to the TNRCC? ☑ Yes ☐ No

5) N

6) WELL LOG:
Date Drilling: Started **11/14** 20 **00** Completed **11/14** 20 **00**

DIAMETER OF HOLE		
Dia.. (in.)	From (ft.)	To (ft.)
9	Surface	149

7) DRILLING METHOD (Check): ☐ Driven ☐ Air Rotary ☑ Mud Rotary ☐ Bored ☐ Air Hammer ☐ Cable Tool ☐ Jetted ☐ Other

From (ft.)	To (ft.)	Description and color of formation material
0	4	Soil
4	10	Caliche
10	24	Sandy clay, caliche rock
24	35	Sandy clay
35	43	Hard rock
43	81	Caliche rock with sand
81	90	Hard rock
90	115	Sandy clay gravel with sand
115	143	Coarse sand with gravel
143	149	Yellow and blue

(Use reverse side if necessary)

8) Borehole Completion (Check): ☐ Open Hole ☐ Straight Wall ☐ Underreamed ☑ Gravel Packed ☐ Other
If Gravel Packed give interval ... from **100** ft. to **149** ft.

CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casting Screen
5	N	Blank steel	+2	107	.250
5	N	SS Screen	107	147	.040
5	N	Blank steel	147	149	.250

9) CEMENTING DATA
Cemented from **+1.5** ft. to **100** ft. No. of sacks used **20**
ft. to ft. No. of sacks used
Method used **positive displacement exterior method**
Cemented by **Hi Plains Drilling, Inc.**
Distance to septic system field lines or other concentrated contamination ft.
Method of verification of above distance

13) ☐ Well plugged within 48 hours

Casing left in well: From (ft)	Casing left in well: To (ft)	Cement/bentonite placed in: From (ft)	Cement/bentonite placed in: To (ft)	Sacks used:

14) TYPE PUMP:
☐ Turbine ☐ Jet ☐ Submersible ☐ Cylinder ☐ Toher
Depth to pump bowls, cylinder, jet, etc., ft.

15) WELL TESTS:
Type test: ☐ Pump ☐ Bailer ☐ Jetted ☐ Estimated
Yield: gpm with ft. drawdown after hrs.

16) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable constituents?
☐ Yes ☑ No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? Depth of strata
Was a chemical analysis made? ☐ Yes ☐ No

10) SURFACE COMPLETION
☐ Specified Surface Slab Installed
☐ Specified Steel Sleeve Installed
☑ Fitless Adapter Used
☐ Approved Alternative Procedure Used

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11) WATER LEVEL
Static Level ft. below land surface Date
Artesian flow gpm Date

12) PACKERS: Type Depth

I certify that I drilled this well (or the well was drilled under my direct supervision) and that each and all of the statements herein are true and correct. I understand that failure to complete items 1 thru 16 will result in the log(s) being returned for completion and resubmittal.

SEQ #

COMPANY NAME **Hi Plains Drilling, Inc.** (Type or print) WELL DRILLER'S LICENSE NO. **2506**

EMP #

ADDRESS **P. O. Box 730** (Street or RFD) **Abernathy** (City) **TX** (State) **79311** (Zip)

DESC CO

MAR 1 9 2001

(Signed) (Licensed Well Driller)

(Signed) (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

TDLR FORM 001WWD (4/98) Forms On-A-Disk, Inc. · Dallas, Texas · (214) 340-9429

Copies to TDLR, DRILLER, and WELL OWNER

05 05

Send original copy by certified return receipt requested to: TDLR, P.O. Box 12157, Austin, TX 78711

ATTENTION OWNER: *Confidentiality Privilege Notice on reverse side of Well Owner's copy (pink)*

State of Texas
WELL REPORT

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
512-463-7880

1) OWNER Steve Messier (Name) ADDRESS RT 1 1 (Street or RFD) Slaton (City) TX (State) 79364 (Zip)

2) ADDRESS OF WELL'S LOCATION: County Lubbock (Street, RFD or other) (City) (State) (Zip) Long. _____ Lat. _____ Grid # 23-34-1

3) TYPE OF WORK (Check): ☒ New Well ☐ Deepening ☐ Reconditioning ☐ Plugging

4) PROPOSED USE (Check): ☐ Monitor ☐ Environmental Soil Boring ☒ Domestic ☐ Industrial ☐ Irrigation ☐ Injection ☐ Public Supply ☐ De-watering ☐ Testwell
If Public Supply well, were plans submitted to the TNRCC? ☐ Yes ☐ No

5) X

6) WELL LOG:
Date Drilling: Started 2-3 19 99 Completed 2-3 19 99

DIAMETER OF HOLE		
Dia. (in.)	From (ft.)	To (ft.)
8	Surface	175

7) DRILLING METHOD (Check): ☐ Driven ☐ Air Rotary ☒ Mud Rotary ☐ Bored ☐ Air Hammer ☐ Cable Tool ☐ Jetted ☐ Other _____

From (ft.)	To (ft.)	Description and color of formation material
0	3	top soil
3	10	caliche
10	45	Sandstone
45	64	rock
64	73	white clay
73	80	Sand stone
80	87	rock
87	96	sandstone
96	112	sand & gravel
112	—	sand & clay

(Use reverse side of Well Owner's copy, if necessary)

8) Borehole Completion (Check): ☐ Open Hole ☒ Straight Wall ☐ Underreamed ☒ Gravel Packed ☐ Other _____
If Gravel Packed give interval from 110 ft. to 175 ft.

CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (In.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casting Screen
5	N	PVC	0	175	160 PSI
		Slotted	115	175	.035

9) CEMENTING DATA
Cemented from 0 ft. to 3 ft. No. of sacks used 1
_____ ft. to _____ ft. No. of sacks used _____
Method used POURED
Cemented by B Carter
Distance to septic system field lines or other concentrated contamination 125 ft.
Method of verification of above distance TAPE

13) ☐ Well plugged within 48 hours

Casing left in well: From (ft)	Casing left in well: To (ft)	Cement/bentonite placed in well: From (ft)	Cement/bentonite placed in well: To (ft)	Sacks used:

14) TYPE PUMP:
☐ Turbine ☐ Jet ☐ Submersible ☐ Cylinder ☐ Other _____
Depth to pump bowls, cylinder, jet, etc., _____ ft.

15) WELL TESTS:
Type test: ☐ Pump ☐ Bailer ☐ Jetted ☐ Estimated
Yield: _____ gpm with _____ ft. drawdown after _____ hrs.

16) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable constituents?
☐ Yes ☒ No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? _____ Depth of strata _____
Was a chemical analysis made? ☐ Yes ☒ No

10) SURFACE COMPLETION
☐ Specified Surface Slab Installed
☐ Specified Steel Sleeve Installed
☒ Pitless Adapter Used
☐ Approved Alternative Procedure Used

11) WATER LEVEL:
Static level 7 ft. below land surface Date _____
Artesian flow _____ gpm. Date _____

12) PACKERS:

Type	Depth

I certify that I drilled this well (or the well was drilled under my direct supervision) and that each and all of the statements herein are true and correct. I understand that failure to complete items 1 thru 16 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME CARTER DRILLING CO., INC. (Type or print) WELL DRILLER'S LICENSE NO. 2320 LD SEQ #

ADDRESS 3301 56TH ST. (Street or RFD) LUBBOCK, TX 79413 (City) (State) (Zip)
(806) 799-0443

(Signed) B Carter (Licensed Well Driller) (Signed) _____ (Registered Driller Trainee)

EMP # DESC CO AUG 31 1999 COMMENT

Please attach electric log, chemical analysis, and other pertinent information, if available.

TDLR FORM 001WWD (4/98) White - TDLR Yellow - DRILLER Pink - WELL OWNER

05 06

Attention Owner: Confidentiality Privilege Notice on reverse side of owner's copy.

Texas Department of License and Regulation

Water Well Driller/Pump Installer Program
P.O. Box 12157 Austin, Texas 78711 (512)463-7880 FAX (512)463-8616
Toll free (800)803-9202
Email address: water.well@license.state.tx.us

This form must be completed and filed with the department and owner within 60 days upon completion of the well.

WELL REPORT

Name	Address	City	State	Zip
Lynn Zickefoose	P.O. Box 6824	Lubbock	TX	79493

County	Physical Address	City	State	Zip
Lubbock 152	Lot 14 FM RD 1585	Lubbock	TX	79323

Lat. 33 | 28 | 62 Long. 101 | 51 | 08 Grid # 23-34-1

3) Type of Work
☑ New Well ☐ Deepening ☐ Reconditioning

4) Proposed Use (check) ☐ Monitor ☐ Environmental Soil Boring ☑ Domestic ☐ Industrial ☐ Irrigation ☐ Injection ☐ Public Supply ☐ De-watering ☐ Testwell
If Public Supply well, were plans submitted to the TNRCC? ☐ Yes ☐ No

5) N↑

6) Drilling Date
Started 4 / 3 / 01
Completed 4 / 3 / 01

Diameter of Hole

Dia.(in)	From (ft)	To (ft)
8 3/4	0	190

7) Drilling Method (check) ☐ Driven ☐ Air Rotary ☑ Mud Rotary ☐ Bored ☐ Air Hammer ☐ Cable Tool ☐ Jetted ☐ Other

From (ft)	To (ft)	Description and color of formation material
1	2	Top Soil
2	41	Sandy Clay
41	100	Sand & Sandstone
100	130	Sand & Gravel
130	150	Sand & Gravel & Brown Clay
150	168	Brown Clay
168	180	Sand & Gravel & Brown Clay
180	189	Yellow Sandstone & White Clay
189	190	Blue Clay

(Use reverse side of Well Owner's copy, if necessary)

8) Borehole Completion ☐ Open Hole ☐ Straight Wall ☐ Under-reamed ☑ Gravel Packed ☐ Other
If Gravel Packed give the interval from ft. to ft.

Casing, Blank Pipe, and Well Screen Data

Dia. (in.)	New Or Used	Steel, Plastic, etc. Perf., Slotted, etc Screen Mfg., if commercial	Setting (ft) From	Setting (ft) To	Gage Casing	Gage Screen
5	N	PVC Plain	0	150		
5	N	PVC Perf.	150	190		

9) Cementing Data
Cementing from 2 ft. to 22 ft. # of sacks used 10
80 ft. to 90 ft. # of sacks used 5
Method Used
Cementing By Jim Kennedy
Distance to septic system field or other concentrated contamination ft.
Method of verification of above distance

10) Surface Completion
☐ Specified Surface Slab Installed
☐ Specified Surface Sleeve Installed
☑ Pitless Adapter Used
☐ Approved Alternative Procedure Used

11) Water Level
Static level 140 ft. below Date 4 / 3 / 01
Artesian Flow gpm. Date / /

12) Packers

Type	Depth
N/A	

13) Plugged ☐ Well plugged within 48 hours
Casing left in well: Cement/Bentonite placed in well:

From (ft)	To (ft)	From (ft)	To (ft)	Sacks used
		N/A		

14) Typepump
☐ Turbine ☐ Jet ☑ Submersible ☐ Cylinder
☐ Other
Depth to pump bowls, cylinder, jet etc., 188 ft.

15) Water Test
Typetest ☐ Pump ☑ Bailer ☐ Jetted ☐ Estimated
Yield: 15 gpm with — ft. drawdown after 1/2 hrs.

16) Water Quality
Did you knowingly penetrate and strata which contain undesirable constituents.
☐ YES ☑ NO If yes, did you submit a REPORT OF UNDESIRABLE WATER
Type of water Depth of Strata
Was a chemical analysis made ☐ Yes ☑ No

RECEIVED JUN 08 2001 TCEQ - CENTRAL FILE ROOM
NOV 22 2004
MAY 24 2001

Company or individual's Name (type or print)	Estill Drilling			
Address P.O. Box 1683-Lubbock Hwy	City Brownfield	State TX.	Zip 79316	
Signature W.A Estill	4 / 3 / 01	Signature Jim Kennedy	/ /	

TDLR FORM 001WWD *White - TDLR Yellow - Owner Pink - Driller/Pump Installer*

05 07

Attention Owner: Confidentiality Privilege Notice on reverse side of owner's copy.

Texas Department of License and Regulation

Water Well Driller/Pump Installer Program
P.O. Box 12157 Austin, Texas 78711 (512)463-7880 FAX (512)463-8616
Toll free (800)803-9202
Email address: water.well@license.state.tx.us

This form must be completed and filed with the department and owner within 60 days upon completion of the well.

WELL REPORT

Name	Address	City	State	Zip
Lynn Zickefoose	P.O. Box 6824	Lubbock	TX	79493

County	Physical Address	City	State	Zip
Lubbock 152	Lot 26 FM RD. 1585	Lubbock	Tx	79323

3) Type of Work ☑ New Well ☐ Deepening ☐ Reconditioning

Lat. 33 | 28 | 168 Long. 101 | 51 | 14 Grid # 23-34-1

4) Proposed Use (check) ☐ Monitor ☐ Environmental Soil Boring ☑ Domestic ☐ Industrial ☐ Irrigation ☐ Injection ☐ Public Supply ☐ De-watering ☐ Testwell

If Public Supply well, were plans submitted to the TNRCC? ☐ Yes ☐ No

5) N↑

6) Drilling Date
Started 4 | 2 | 01
Completed 4 | 2 | 01

Diameter of Hole

Dia.(in)	From (ft)	To (ft)
8 3/4	0	181

7) Drilling Method (check) ☐ Driven ☐ Air Rotary ☑ Mud Rotary ☐ Bored ☐ Air Hammer ☐ Cable Tool ☐ Jetted ☐ Other

From (ft)	To (ft)	Description and color of formation material
1	2	Top Soil
2	3	Caliche
3	36	Sandy Clay
36	100	Sand & Sandstone
100	150	Sand & Gravel
150	157	Brown Clay
157	1606	Sand & Gravel
1606	174	Brown Clay
174	180	Yellow Clay
180	181	Yellow Sandstone & White Clay

(Use reverse side of Well Owner's copy, if necessary)

8) Borehole Completion ☐ Open Hole ☐ Straight Wall ☐ Under-reamed ☑ Gravel Packed ☐ Other
If Gravel Packed give the interval from 90 ft. to 181 ft.

Casing, Blank Pipe, and Well Screen Data

Dia. (in.)	New Or Used	Steel, Plastic, etc. Perf., Slotted, etc Screen Mfg., if commercial	Setting (ft) From	Setting (ft) To	Gage Casing	Gage Screen
5	N	PVC Plain	0	141		
5	N	PVC Perf	141	181		

9) Cementing Data
Cementing from 2 ft. to 22 ft. # of sacks used 10
80 ft. to 90 ft. # of sacks used 5
Method Used
Cementing By Jim Kennedy
Distance to septic system field or other concentrated contamination ft.
Method of verification of above distance

13) Plugged ☐ Well plugged within 48 hours
Casing left in well: Cement/Bentonite placed in well:

From (ft)	To (ft)	From (ft)	To (ft)	Sacks used
		N/A		

10) Surface Completion
☐ Specified Surface Slab Installed
☐ Specified Surface Sleeve Installed
☐ Pitless Adapter Used
☐ Approved Alternative Procedure Used

14) Typepump ☐ Turbine ☐ Jet ☑ Submersible ☐ Cylinder ☐ Other
Depth to pump bowls, cylinder, jet etc., 177 ft.

11) Water Level
Static level 131 ft. below Date 4 | 2 | 01
Artesian Flow gpm. Date / /

15) Water Test
Typetest ☐ Pump ☑ Bailer ☐ Jetted ☐ Estimated
Yield: 15 gpm with — ft. drawdown after hrs.

12) Packers

Type	Depth
N/A	

16) Water Quality
Did you knowingly penetrate and strata which contain undesirable constituents.
☐ YES ☑ NO If yes, did you submit a REPORT OF UNDESIRABLE WATER
Type of water Depth of Strata
Was a chemical analysis made ☐ Yes ☑ No

RECEIVED
JUN 0 8 2001
NOV 2 2 2004
TCEQ - CENTRAL FILE ROOM
MAY 2 4 2001

Company or individual's Name (type or print)	Estill Drilling		
Address P.O. Box 1683-Lubbock Hwy	City Brownfield	State Texas	Zip 79316
Signature W A Estill	4 / 2 / 01	Signature Jim Kennedy	/ /

TDLR FORM 001WWD White - TDLR Yellow - Owner Pink - Driller/Pump Installer

05 08

Attention Owner: Confidentiality Privilege Notice on reverse side of owner's copy.

Texas Department of License and Regulation

Water Well Driller/Pump Installer Program
P.O. Box 12157 Austin, Texas 78711 (512)463-7880 FAX (512)463-8616
Toll free (800)803-9202
Email address: water.well@license.state.tx.us

This form must be completed and filed with the department and owner within 60 days upon completion of the well.

WELL REPORT

Name	Address	City	State	Zip
Lynn Zickefoose	P.O. Box 6824	Lubbock	TX	79493

County	Physical Address	City	State	Zip
Lubbock 152	Lot 27 FM 1RD. 1585	Lubbock	TX	79323

3) Type of Work
☑ New Well ☐ Deepening ☐ Reconditioning

Lat. 33 | 28 | 70 Long. 101 | 51 | 18 Grid # 23-34-1

4) Proposed Use (check) ☐ Monitor ☐ Environmental Soil Boring ☑ Domestic ☐ Industrial ☐ Irrigation ☐ Injection ☐ Public Supply ☐ De-watering ☐ Testwell
If Public Supply well, were plans submitted to the TNRCC? ☐ Yes ☐ No

5) N↑

6) Drilling Date
Started 3 | 30 | 01
Completed 3 | 30 | 01

Diameter of Hole

Dia.(in)	From (ft)	To (ft)
8 3/4	0	180

7) Drilling Method (check) ☐ Driven ☐ Air Rotary ☑ Mud Rotary ☐ Bored ☐ Air Hammer ☐ Cable Tool ☐ Jetted ☐ Other

From (ft)	To (ft)	Description and color of formation material
1	2	Top Soil
2	35	Sandy Clay
35	102	Sand & Sandstone
102	154	Sand & Gravel
154	160	Brown Clay
160	165	Sand & Gravel & Brown Clay
165	170	Brown Clay
170	173	Sand & Sandstone
173	180	Yellow Clay

(Use reverse side of Well Owner's copy, If necessary)

8) Borehole Completion ☐ Open Hole ☐ Straight Wall ☐ Under-reamed ☑ Gravel Packed ☐ Other
If Gravel Packed give the interval from 90 ft. to 180 ft.

Casing, Blank Pipe, and Well Screen Data

Dia. (in.)	New Or Used	Steel, Plastic, etc. Perf., Slotted, etc Screen Mfg., if commercial	Setting (ft) From	Setting (ft) To	Gage Casing	Gage Screen
5	N	PVC Plain	0	140		
5	N	PVC Perf	140	180		

9) Cementing Data
Cementing from 2 ft. to 22 ft. # of sacks used 10
80 ft. to 90 ft. # of sacks used 5
Method Used
Cementing By Tim Kennedy
Distance to septic system field or other concentrated contamination ___ ft.
Method of verification of above distance

10) Surface Completion
☐ Specified Surface Slab Installed
☐ Specified Surface Sleeve Installed
☐ Pitless Adapter Used
☐ Approved Alternative Procedure Used

11) Water Level
Static level 130 ft. below Date 3/30/01
Artesian Flow ___ gpm. Date

12) Packers Type ___ Depth

13) Plugged ☐ Well plugged within 48 hours

Casing left in well: From (ft)	To (ft)	Cement/Bentonite placed in well: From (ft)	To (ft)	Sacks used
		N/A		

14) Typepump
☐ Turbine ☐ Jet ☑ Submersible ☐ Cylinder ☐ Other
Depth to pump bowls, cylinder, jet etc. 178 ft.

15) Water Test
Typetest ☐ Pump ☑ Bailer ☐ Jetted ☐ Estimated
Yield: 15 gpm with — ft. drawdown after 1 hrs.

16) Water Quality
Did you knowingly penetrate and strata which contain undesirable constituents.
☐ YES ☑ NO If yes, did you submit a REPORT OF UNDESIRABLE WATER
Type of water ___ Depth of Strata ___
Was a chemical analysis made ☐ Yes ☐ No

RECEIVED JUN 08 2001 TCEQ - CENTRAL FILE ROOM
NOV 22 2004
MAY 24 2001

Company or individual's Name (type or print)	Estill Drilling			
Address P.O. Box 1638-Lubbock Hwy	City Brownfield	State TX.	Zip 79316	
Signature W.A Estill	3/30/01	Signature Tim Kennedy		

Licensed Water Well Drilling Installation

TDLR FORM 001WWD White - TDLR Yellow - Owner Pink - Driller/Pump Installer

05 09

Attention Owner: Confidentiality Privilege Notice on reverse side of owner's copy.

Texas Department of License and Regulation

Water Well Driller/Pump Installer Program
P.O. Box 12157 Austin, Texas 78711 (512)463-7880 FAX (512)463-8616
Toll free (800)803-9202
Email address: water.well@license.state.tx.us

This form must be completed and filed with the department and owner within 60 days upon completion of the well.

WELL REPORT

Name	Address	City	State	Zip
Lum Tickelhorse	P O. Box 6824	Lubbock	Tx	79493

County	Physical Address	City	State	Zip
Lubbock 152	Lot 24 FM RD 1585	Lubbock	TX	79423

3) Type of Work
☑ New Well ☐ Reconditioning ☐ Replacement ☐ Deepening

Lat. 33 28 70 Long. 101 51 08 Grid # 23-34-1

4) Proposed Use (check) ☐ Monitor ☐ Environmental Soil Boring ☑ Domestic ☐ Industrial ☐ Irrigation ☐ Injection ☐ Public Supply ☐ De-watering ☐ Testwell ☐ Rig Supply
If Public Supply well, were plans submitted? ☐ Yes ☐ No

5) N↑

6) Drilling Date
Started 5/22/01
completed 5/22/01

Diameter of Hole

Dia.(in)	From (ft)	To (ft)
8 3/4	0	170

7) Drilling Method (check) ☐ Driven ☐ Air Rotary ☑ Mud Rotary ☐ Bored ☐ Air Hammer ☐ Cable Tool ☐ Jetted ☐ Other

From (ft)	To (ft)	Description and color of formation material
0	2	Top Soil
2	35	Sandy Clay
35	96	Sand & Sandstone
96	105	Sand
105	150	Sand & Gravel
150	160	Brown Clay
160	167	Sand & Gravel
167	170	Brown Clay

(Use reverse side of Well Owner's copy, if necessary)

SEQ # FILE # DESC CD EMP # COMMENT AG

JUL 11 2001

8) Borehole Completion ☐ Open Hole ☐ Straight Wall ☐ Under-reamed ☑ Gravel Packed ☐ Other
If Gravel Packed give the interval from 90 ft. to 170 ft.

Casing, Blank Pipe, and Well Screen Data

Dia. (in.)	New Or Used	Steel, Plastic, etc. Perf., Slotted, etc Screen Mfg., if commercial	Setting (ft) From	Setting (ft) To	Gage Casing	Gage Screen
5	N	PVC	0	170		
5	N	PVC Perf.	130	170		

9) Cementing Data
Cementing from 2 ft. to 42 ft. # of sacks used 14
80 ft. to 90 ft. # of sacks used 3
Method Used
Cementing By Jim Kennedy
Distance to septic system field or other concentrated contamination ft.
Method of verification of above distance

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10) Surface Completion
☐ Specified Surface Slab Installed
☐ Specified Surface Sleeve Installed
☑ Pitless Adapter Used
☐ Approved Alternative Procedure Used

TCEQ - CENTRAL FILE ROOM

11) Water Level
Static level 125 ft. below Date 5/22/01
Artesian Flow gpm. Date

12) Packers

Type	Depth
N/A	

13) Plugged ☐ Well plugged within 48 hours

Casing left in well: From (ft)	To (ft)	Cement/Bentonite placed in well: From (ft)	To (ft)	Sacks used
		N/A		

14) Type Pump
☐ Turbine ☐ Jet ☑ Submersible ☐ Cylinder ☐ Other
Depth to pump bowls, cylinder, jet etc., 167 ft.

15) Water Test
Typetest ☐ Pump ☑ Bailer ☐ Jetted ☐ Estimated
Yield: 15 gpm with — ft. drawdown after 1 hrs.

16) Water Quality
Did you knowingly penetrate a strata which contain undesirable constituents.
☐ YES ☑ NO If yes, did you submit a REPORT OF UNDESIRABLE WATER
Type of water Depth of Strata
Was a chemical analysis made ☐ Yes ☑ No

Company or individual's Name (type or print)	Estill Drilling INV# 6226	Lic. No.	WI 2329
Address P.O. Box 683 - Lubbock Hwy	City Brownfield	State Tx	Zip 79316
Signature W.A. Bustu Estill	5/22/01	Signature Jim Kennedy	5/22/01

TDLR FORM b001WWD *White - TDLR* *Yellow - Owner* *Pink - Driller/Pump Installer* 05 10

Attention Owner: Confidentiality Privilege Notice on reverse side of owner's copy.

Texas Department of License and Regulation

Water Well Driller/Pump Installer Program
P.O. Box 12157 Austin, Texas 78711 (512)463-7880 FAX (512)463-8616
Toll free (800)803-9202
Email address: water.well@license.state.tx.us

This form must be completed and filed with the department and owner within 60 days upon completion of the well.

WELL REPORT

1) OWNER

Name	Address	City	State	Zip
Lynn Zickefoose	P.O. Box 1682	Lubbock	Tx	79493

2) WELL LOCATION

County	Physical Address	City	State	Zip
Lubbock 152	FM RD 1585 Lot 18	Lubbock	Tx.	

Lat. 33 | 28 | 59 Long. 101 | 50 | 192 Grid # 23-34-1

3) Type of Work
☑ New Well ☐ Deepening ☐ Reconditioning

4) Proposed Use (check) ☐ Monitor ☐ Environmental Soil Boring ☑ Domestic ☐ Industrial ☐ Irrigation ☐ Injection ☐ Public Supply ☐ De-watering ☐ Testwell
If Public Supply well, were plans submitted to the TNRCC? ☐ Yes ☐ No

5) N↑

6) Drilling Date
Started 5 | 18 | 01
Completed 5 | 18 | 01

Diameter of Hole

Dia.(in)	From (ft)	To (ft)
8 3/4	0	170

7) Drilling Method (check) ☐ Driven ☐ Air Rotary ☑ Mud Rotary ☐ Bored ☐ Air Hammer ☐ Cable Tool ☐ Jetted ☐ Other

From (ft)	To (ft)	Description and color of formation material
1	2	Top Soil
2	30	Sandy Clay
30	107	Sand & Sandstone
107	150	Sand & Gravel
150	156	Brown Clay
156	168	Sand & Gravel
168	170	Brown Clay

(Use reverse side of Well Owner's copy, If necessary)

8) Borehole Completion ☐ Open Hole ☐ Straight Wall ☐ Under-reamed ☑ Gravel Packed ☐ Other
If Gravel Packed give the interval from 90 ft. to 170 ft.

Casing, Blank Pipe, and Well Screen Data

Dia. (in.)	New Or Used	Steel, Plastic, etc. Perf., Slotted, etc Screen Mfg., if commercial	Setting (ft) From	Setting (ft) To	Gage Casing	Gage Screen
5	N	PVC	0	170		
5	N	PVC Perf.	130	170		

9) Cementing Data
Cementing from 2 ft. to 42 ft. # of sacks used 14
80 ft. to 90 ft. # of sacks used 3
Method Used
Cementing By Jim Kennedy
Distance to septic system field or other concentrated contamination ___ ft.
Method of verification of above distance

10) Surface Completion
☐ Specified Surface Slab Installed
☐ Specified Surface Sleeve Installed
☑ Pitless Adapter Used
☐ Approved Alternative Procedure Used

11) Water Level
Static level 125 ft. below Date 5 | 18 | 01
Artesian Flow ___ gpm. Date

12) Packers

Type	Depth
N/A	

13) Plugged ☐ Well plugged within 48 hours
Casing left in well: Cement/Bentonite placed in well:

From (ft)	To (ft)	From (ft)	To (ft)	Sacks used
		N/A		

14) Typepump
☐ Turbine ☐ Jet ☑ Submersible ☐ Cylinder ☐ Other
Depth to pump bowls, cylinder, jet etc. 167 ft.

15) Water Test
Typetest ☐ Pump ☑ Bailer ☐ Jetted ☐ Estimated
Yield: 15 gpm with — ft. drawdown after 1 hrs.

16) Water Quality
Did you knowingly penetrate and strata which contain undesirable constituents.
☐ YES ☑ NO If yes, did you submit a REPORT OF UNDESIRABLE WATER
Type of water ___ Depth of Strata ___
Was a chemical analysis made ☐ Yes ☑ No

RECEIVED NOV 2001 TCEQ - CENTRAL FILE ROOM

Company or individual's Name (type or print)	Estell Drilling	FNV# 5554	WI 2329	
Address	P O Box 1683 - Lubbock Hwy	City Brownfield	State Tx.	Zip 79316
Signature	W A Estell	5 | 18 | 01	Signature	Jim Kennedy
	Driller/Pump Installer		Driller	

TDLR FORM 001WWD *White - TDLR* *Yellow - Owner* *Pink - Driller/Pump Installer*

05 11

Send original copy by certified return receipt requested mail | TDLR, P.O. Box 12157, Austin, TX 78711

ATTENTION OWNER: *Confidentiality Privilege Notice on reverse side of Well Owner's copy (pink)*

State of Texas
WELL REPORT

water.well@license.state.tx.us

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
512-463-7880

1) OWNER Lynn Zickefoose (Name) ADDRESS P.O. Box 6824 (Street or RFD) Lubbock (City) Tx. (State) 79493 (Zip)

2) ADDRESS OF WELL'S LOCATION: County Lubbock Lot 16 FM RD 1585 (Street, RFD or other) Lubbock (City) Tx. (State) 79423 (Zip) Lat. 33-28-65 Long. 101-51-02 Grid # 23-34-1

3) TYPE OF WORK (Check): ☑ New Well ☐ Deepening ☐ Reconditioning ☐ Plugging

(4) PROPOSED USE (Check): ☐ Monitor ☐ Environmental Soil Boring ☑ Domestic ☐ Industrial ☐ Irrigation ☐ Injection ☐ Public Supply ☐ De-watering ☐ Testwell
If Public Supply well, were plans submitted to the TNRCC? ☐ Yes ☐ No

5)

6) WELL LOG:
Date Drilling: Started 5-17 20 01 Completed 5-17 20 01

DIAMETER OF HOLE

Dia. (in.)	From (ft.)	To (ft.)
8 3/4	Surface	170

7) DRILLING METHOD (Check): ☐ Driven ☐ Air Rotary ☑ Mud Rotary ☐ Bored ☐ Air Hammer ☐ Cable Tool ☐ Jetted ☐ Other

N

From (ft.)	To (ft.)	Description and color of formation material
1	2	Top Soil
2	30	Sandy Clay
30	44	Sand
44	50	Sandstone
50	104	Sand & Sandstone
104	150	Sand & Gravel
150	158	Brown Clay
158	167	Sand & Gravel
167	170	Brown Clay

(Use reverse side of Well Owner's copy, if necessary)

8) Borehole Completion (Check): ☐ Open Hole ☐ Straight Wall ☐ Underreamed ☑ Gravel Packed ☐ Other
If Gravel Packed give interval from 90 ft. to 170 ft.

CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casing Screen
5	N	PVC	0	170	
5	N	PVC Perf	130	170	

9) CEMENTING DATA
Cemented from 2 ft. to 42 ft. No. of sacks used 14
80 ft. to 90 ft. No. of sacks used 3
Method used
Cemented by Jim Kennedy
Distance to septic system field lines or other concentrated contamination ft.
Method of verification of above distance

FILE ID SEQ # FMP # DESC CO

13) ☐ Well plugged within 48 hours

Casing left in well: From (ft)	Casing left in well: To (ft)	Cement/bentonite placed in well: From (ft)	Cement/bentonite placed in well: To (ft)	Sacks used:
		N/A		

10) SURFACE COMPLETION
☐ Specified Surface Slab Installed
☐ Specified Steel Sleeve Installed
☑ Pitless Adapter Used
☐ Approved Alternative Procedure Used

JUL 12 2001 NT AG

14) TYPE PUMP:
☐ Turbine ☐ Jet ☑ Submersible ☐ Cylinder ☐ Other
Depth to pump bowls, cylinder, jet, etc., 167 ft.

15) WELL TESTS:
Type test: ☐ Pump ☑ Bailer ☐ Jetted ☐ Estimated
Yield: 15 gpm with — ft. drawdown after 1 hrs.

11) WATER LEVEL:
Static level 125 ft. below land surface Date 5-17-01
Artesian flow gpm. Date

RECEIVED NOV 22 2004 TCEQ - CENTRAL FILE ROOM

16) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable constituents?
☐ Yes ☑ No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? Depth of strata
Was a chemical analysis made? ☐ Yes ☑ No

12) PACKERS

Type	Depth
N/A	

I certify that I drilled this well (or the well was drilled under my direct supervision) and that each and all of the statements herein are true and correct. I understand that failure to complete items 1 thru 16 will result in the log(s) being returned for completion and resubmittal. INV#5552

COMPANY NAME Estill Drilling (Type or print) WELL DRILLER'S LICENSE NO: WL 2329

ADDRESS P.O. Box 683 Lubbock Hwy (Street or RFD) Brownfield (City) Tx. (State) 79316 (Zip)

(Signed) W A Estell (Licensed Well Driller) 5-17-01 (Signed) Jim Kennedy (Registered Driller Apprentice) 5-17-01

Please attach electric log, chemical analysis, and other pertinent information, if available.

TDLR FORM 001WWD (4/98) White - TDLR Yellow - DRILLER Pink - WELL OWNER

05 12

Attention Owner: Confidentiality Privilege Notice on reverse side of owner's copy.

Texas Department of License and Regulation

Water Well Driller/Pump Installer Program
P.O. Box 12157 Austin, Texas 78711 (512)463-7880 FAX (512)463-8616
Toll free (800)803-9202
Email address: water.well@license.state.tx.us

This form must be completed and filed with the department and owner within 60 days upon completion of the well.

WELL REPORT

Name	Address	City	State	Zip
Hunn Zickelooze	P.O. Box 6824	Lubbock	Tx	79493

County	Physical Address	City	State	Zip
Lubbock 152	Lot 15 FM RD 1585	Lubbock	Tx	79423

3) Type of Work
☑ New Well ☐ Reconditioning ☐ Replacement ☐ Deepening

Lat. 33 28 60 Long. 101 51 04 Grid # 23-34-1

4) Proposed Use (check) ☐ Monitor ☐ Environmental Soil Boring ☑ Domestic ☐ Industrial ☐ Irrigation ☐ Injection ☐ Public Supply ☐ De-watering ☐ Testwell ☐ Rig Supply
If Public Supply well, were plans submitted? ☐ Yes ☐ No

5) N↑

6) Drilling Date
Started 5/16/01
Completed 5/16/01

Diameter of Hole

Dia.(in)	From (ft)	To (ft)
8 3/4	0	170

7) Drilling Method (check) ☐ Driven ☐ Air Rotary ☑ Mud Rotary ☐ Bored ☐ Air Hammer ☐ Cable Tool ☐ Jetted ☐ Other

From (ft)	To (ft)	Description and color of formation material
1	2	Top Soil
2	30	Sandy Clay
30	42	Sand
42	50	Sandstone
50	107	Sand & Sandstone
107	150	Sand & Gravel
150	158	Brown Clay
158	167	Sand & Gravel
167	170	Brown Clay

(Use reverse side of Well Owner's copy, If necessary)

8) Borehole Completion ☐ Open Hole ☐ Straight Wall ☐ Under-reamed ☑ Gravel Packed ☐ Other
If Gravel Packed give the interval from 90 ft. to 170 ft.

Casing, Blank Pipe, and Well Screen Data

Dia. (in.)	New Or Used	Steel, Plastic, etc. Perf., Slotted, etc Screen Mfg., if commercial	Setting (ft) From	Setting (ft) To	Gage Casing Screen
5	N	PVC Plain	0	170	
5	N	PVC Perf.	130	170	

9) Cementing Data
Cementing from 2 ft. to 42 ft. # of sacks used 14
80 ft. to 90 ft. # of sacks used 3
Method Used
Cementing By Allen Kenneally
Distance to septic system field or other concentrated contamination ___ ft.
Method of verification of above distance

13) Plugged ☐ Well plugged within 48 hours
Casing left in well: Cement/Bentonite placed in well:

From (ft)	To (ft)	From (ft)	To (ft)	Sacks used
		N/A		

14) Type Pump
☐ Turbine ☐ Jet ☑ Submersible ☐ Cylinder ☐ Other
Depth to pump bowls, cylinder, jet etc., 167 ft.

15) Water Test
Typetest ☐ Pump ☑ Bailer ☐ Jetted ☐ Estimated
Yield: 15 gpm with – ft. drawdown after 1 hrs.

16) Water Quality
Did you knowingly penetrate a strata which contain undesirable constituents.
☐ YES ☑ NO If yes, did you submit a REPORT OF UNDESIRABLE WATER
Type of water Depth of Strata
Was a chemical analysis made ☐ Yes ☑ No

10) Surface Completion
☐ Specified Surface Slab Installed
☐ Specified Surface Sleeve Installed
☐ Pitless Adapter Used
☐ Approved Alternative Procedure Used

JUL 11 2001 DESC CO CMP # COMMENT HG

11) Water Level
Static level 25 ft. below Date 5/16/01
Artesian Flow gpm. Date / /

NOV 22 2004

12) Packers

Type	Depth

TCEQ CENTRAL FILE ROOM

Company or individual's Name (type or print)	Estill Drilling Inv # 6230	Lic. No. WI 2329
Address P.O. Box 683 - Lubbock Hwy	City Brownfield	State TX Zip 79316
Signature W A Estill	5/16/01	Signature / /

TDLR FORM b091WWD *White - TDLR* *Yellow - Owner* *Pink - Driller/Pump Installer*

05 13

Send original copy by certified return receipt requested to TNRCC, MC 177, P.O. Box 13087, Austin, TX 78711-30

ATTENTION OWNER: *Confidentiality Privilege Notice on on reverse side of Well Owner's copy (pink)*

State of Texas
WELL REPORT

Texas Water Well Drillers Advisory Council
MC 177
P.O. Box 13087
Austin, TX 78711-3087
512-239-0530

1) **OWNER** Leonard Mantooth (Name) **ADDRESS** S. of City (Street or RFD) Lubbock (City) TX (State) (Zip)

2) **ADDRESS OF WELL:** County Lubbock (Street, RFD or other) (City) (State) (Zip) **GRID #** 23-34-1

3) **TYPE OF WORK (Check):** ☑ New Well ☐ Deepening ☐ Reconditioning ☐ Plugging

4) **PROPOSED USE (Check):** ☐ Monitor ☐ Environmental Soil Boring ☑ Domestic ☐ Industrial ☐ Irrigation ☐ Injection ☐ Public Supply ☐ De-watering ☐ Testwell
If Public Supply well, were plans submitted to the TNRCC? ☐ Yes ☐ No

5) X N

6) **WELL LOG:**
Date Drilling: Started 9-19 19 97 Completed 9-19 19 97

DIAMETER OF HOLE		
Dia. (in.)	From (ft.)	To (ft.)
8	Surface	182

7) **DRILLING METHOD (Check):** ☐ Driven ☐ Air Rotary ☑ Mud Rotary ☐ Bored ☐ Air Hammer ☐ Cable Tool ☐ Jetted ☐ Other

From (ft.)	To (ft.)	Description and color of formation material
0	4	top soil
4	12	caliche
12	53	sandstone & clay
53	60	rock
60	71	sandstone
71	107	sandstone & clay
107	131	sand & clay
131	135	clay
135	152	sand
152	175	clay & sand layer
175	180	brown clay
180	182	yellow clay

(Use reverse side of Well Owner's copy, if necessary)

8) **Borehole Completion (Check):** ☐ Open Hole ☑ Straight Wall ☐ Underreamed ☑ Gravel Packed ☐ Other
If Gravel Packed give interval ... from 20 ft. to 182 ft.

CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casting Screen
5	N	PVC	0	182	160PSI
		Slotted	122	182	.035

9) **CEMENTING DATA** [Rule 338.44(1)]
Cemented from 0 ft. to 20 ft. No. of sacks used 1 1/2
ft. to ft. No. of sacks used
Method used poured
Cemented by B Carter
Distance to septic system field lines or other concentrated contamination 125 ft.
Method of verification of above distance TAPE

10) **SURFACE COMPLETION**
☐ Specified Surface Slab Installed [Rule 338.44(2)(A)]
☑ Specified Steel Sleeve Installed [Rule 338.44(3)(A)]
☐ Pitless Adapter Used [Rule 338.44(3)(b)]
☐ Approved Alternative Procedure Used [Rule 338.71]

13) **TYPE PUMP:** ☐ Turbine ☐ Jet ☐ Submersible ☐ Cylinder ☐ Other
Depth to pump bowls, cylinder, jet, etc., ft.

14) **WELL TESTS:** Type test: ☐ Pump ☐ Bailer ☐ Jetted ☐ Estimated
Yield: gpm with ft. drawdown after hrs.

11) **WATER LEVEL:**
Static level ft. below land surface Date
Artesian flow gpm. Date

15) **WATER QUALITY:**
Did you knowingly penetrate any strata which contained undesirable constituents?
☐ Yes ☒ No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? Depth of strata
Was a chemical analysis made? ☐ Yes ☒ No

12) **PACKERS:** Type Depth

FILE # SEQ #
EMP # 2379 DESC CO
SEP 09 1998
COMMENT TEMP

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 15 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME CARTER DRILLING CO., INC. **WELL DRILLER'S LICENSE NO.**
ADDRESS 3301 50TH ST. (Street or Rt) LUBBOCK, TX 79413 (806) 799-0441 (City) (State) (Zip)
(Signed) (Licensed Well Driller) **(Signed)** (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

TNRCC-0199 (Rev. 05-21-96) *White - TNRCC Yellow - DRILLER Pink - WELL OWNER* 05 14

Send original copy by certified return receipt requested mai TDLR, P.O. Box 12157, Austin, TX 78711

ATTENTION OWNER: *Confidentiality Privilege Notice on reverse side of Well Owner's copy (pink)*

State of Texas
WELL REPORT

water.well@license.state.tx.us

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
512-463-7880

1) OWNER Lynn Zickefoose (Name) ADDRESS P.O. Box 6824 (Street or RFD) Lubbock (City) Tx (State) 79493 (Zip)

2) ADDRESS OF WELL'S LOCATION: County Lubbock 152 FM RD. 1585 Lot 25 (Street, RFD or other) Lubbock (City) (State) (Zip) Lat. 33-28-65 Long. 101-51-13 Grid # 23-34-1

3) TYPE OF WORK (Check): [x] New Well [ ] Deepening [ ] Reconditioning [ ] Plugging

(4) PROPOSED USE (Check): [ ] Monitor [ ] Environmental Soil Boring [x] Domestic [ ] Industrial [ ] Irrigation [ ] Injection [ ] Public Supply [ ] De-watering [ ] Testwell

If Public Supply well, were plans submitted to the TNRCC? [ ] Yes [ ] No

5)

6) WELL LOG:
Date Drilling:
Started 5-18 2001
Completed 5-18 2001

DIAMETER OF HOLE

Dia. (in.)	From (ft.)	To (ft.)
8 3/4	Surface	170

7) DRILLING METHOD (Check): [ ] Driven [ ] Air Rotary [x] Mud Rotary [ ] Bored [ ] Air Hammer [ ] Cable Tool [ ] Jetted [ ] Other

N

From (ft.)	To (ft.)	Description and color of formation material
1	2	Top Soil
2	30	Sandy Clay
30	70	Sand & Sandstone
70	82	Sandstone
82	95	Sand & Sandstone
95	105	Sand
105	148	Sand & Gravel
148	157	Brown Clay
157	166	Sand & Gravel
166	170	Brown Clay

(Use reverse side of Well Owner's copy, if necessary)

8) Borehole Completion (Check): [ ] Open Hole [ ] Straight Wall [ ] Underreamed [x] Gravel Packed [ ] Other
If Gravel Packed give interval from 90 ft. to 170 ft.

CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casing Screen
5	N	PVC	0	170	
5	N	PVC Perf.	130	170	

9) CEMENTING DATA
Cemented from 2 ft. to 42 ft. No. of sacks used 14
80 ft. to 90 ft. No. of sacks used 3
Method used
Cemented by Jim Kennedy
Distance to septic system field lines or other concentrated contamination ft.
Method of verification of above distance

13) [ ] Well plugged within 48 hours

Casing left in well: From (ft)	To (ft)	Cement/bentonite placed in well: From (ft)	To (ft)	Sacks used:
		N/A		

10) SURFACE COMPLETION
[ ] Specified Surface Slab Installed
[ ] Specified Steel Sleeve Installed
[x] Pitless Adapter Used
[ ] Approved Alternative Procedure Used

RECEIVED NOV 02 2004 2001 FILE ID COMMENT DESC CO AG SID
TDLR - CENTRAL FILE ROOM

14) TYPE PUMP: [ ] Turbine [ ] Jet [x] Submersible [ ] Cylinder [ ] Other
Depth to pump bowls, cylinder, jet, etc., 167 ft.

15) WELL TESTS:
Type test [ ] Pump [x] Bailer [ ] Jetted [ ] Estimated
Yield: 15 gpm with — ft. drawdown after 1 hrs.

11) WATER LEVEL:
Static level 125 ft. below land surface Date 5-18-01
Artesian flow gpm. Date

16) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable constituents?
[ ] Yes [x] No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? Depth of strata
Was a chemical analysis made? [ ] Yes [x] No

12) PACKERS: Type Depth
N/A

I certify that I drilled this well (or the well was drilled under my direct supervision) and that each and all of the statements herein are true and correct. I understand that failure to complete items 1 thru 16 will result in the log(s) being returned for completion and resubmittal.

INV# 5555

COMPANY NAME Estill Drilling (Type or print) WELL DRILLER'S LICENSE NO. WI 2329

ADDRESS P.O. Box 1683 - Lubbock Hwy. (Street or RFD) Brownfield (City) Tx. (State) 79316 (Zip)

(Signed) W. A. Estill (Licensed Well Driller) 5-18-01 (Signed) Jim Kennedy (Registered Driller Apprentice)

Please attach electric log, chemical analysis, and other pertinent information, if available.

TDLR FORM 001WWD (4/98) *White - TDLR* *Yellow - DRILLER* *Pink - WELL OWNER*

05 1

Attention Owner:
Confidentiality Privilege Notice on reverse side of owner's copy.

Texas Department of License and Regulation
Water Well Driller/Pump Installer Program
P.O. Box 12157 Austin, Texas 78711 (512)463-7880 FAX (512)463-8616
Toll free (800)803-9202
Email address: water.well@license.state.tx.us

This form must be completed and filed with the department and owner within 60 days upon completion of the well.

WELL REPORT

Name	Address	City	State	Zip
Lynn Zickefoose	P.O. Box 6824	Lubbock	Texas	79493

County	Physical Address	City	State	Zip
Lubbock 152	F.R. 1585; Lot 19	Lubbock	Tx.	79423

Lat. 33/28/69 Long. 101/50/98 Grid # 23-34-1

3) Type of Work
☑ New Well ☐ Reconditioning ☐ Replacement ☐ Deepening

4) Proposed Use (check) ☐ Monitor ☐ Environmental Soil Boring ☑ Domestic ☐ Industrial ☐ Irrigation ☐ Injection ☐ Public Supply ☐ De-watering ☐ Testwell ☐ Rig Supply
If Public Supply well, were plans submitted? ☐ Yes ☐ No

5) N↑

6) Drilling Date
Started 08/29/01
Completed 08/29/01

Diameter of Hole

Dia.(in)	From (ft)	To (ft)
8 3/4	0	170

7) Drilling Method (check) ☐ Driven ☐ Air Rotary ☑ Mud Rotary ☐ Bored ☐ Air Hammer ☐ Cable Tool ☐ Jetted ☐ Other

From (ft)	To (ft)	Description and color of formation material
1	2	Top Soil
2	40	Sandy Clay
40	50	Sandstone
50	70	Sand and Sandstone
70	80	Sandstone
80	95	Sand and Sandstone
95	147	Sand and Gravel
147	150	Brown Clay
150	167	Sand
167	170	Brown Clay

(Use reverse side of Well Owner's copy, If necessary)

8) Borehole Completion ☐ Open Hole ☐ Straight Wall ☐ Under-reamed ☑ Gravel Packed ☐ Other
If Gravel Packed give the interval from 85 ft. to 170 ft.

Casing, Blank Pipe, and Well Screen Data

Dia. (in.)	New Or Used	Steel, Plastic, etc. Perf., Slotted, etc Screen Mfg., if commercial	Setting (ft) From	To	Gage Casing Screen
5'	N	PVC	0-170		
5"	N	PVC Perf.	130-170		

9) Cementing Data
Cementing from 2 ft. to 85 ft. # of sacks used 28
ft. to ft. # of sacks used
Method Used
Cementing By Jimmy Kennedy
Distance to septic system field or other concentrated contamination ____ft.
Method of verification of above distance

13) Plugged ☐ Well plugged within 48 hours
Casing left in well: Cement/Bentonite placed in well:

From (ft)	To (ft)	From (ft)	To (ft)	Sacks used
N/A				

10) Surface Completion
☐ Specified Surface Slab Installed
☐ Specified Surface Sleeve Installed
☑ Pitless Adapter Used
☐ Approved Alternative Procedure Used

FILE ID
EMP # SEP 18 2001 DESC CO
COMMENT

14) Type Pump
☐ Turbine ☐ Jet ☑ Submersible ☐ Cylinder ☐ Other
Depth to pump bowls, cylinder, jet etc., 165 ft.

11) Water Level
Static level 130 ft. below Date 08/29/01
Artesian Flow gpm. Date

15) Water Test
Typetest ☐ Pump ☑ Bailer ☐ Jetted ☐ Estimated
Yield: 15 gpm with — ft. drawdown after 1 hrs.

12) Packers Type Depth
N/A

16) Water Quality
Did you knowingly penetrate a strata which contain undesirable constituents.
☐ YES ☑ NO If yes, did you submit a REPORT OF UNDESIRABLE WATER
Type of water ____ Depth of Strata ____
Was a chemical analysis made ☐ Yes ☑ No

RECEIVED
NOV 22 2004
CENTRAL FILE ROOM

Company or individual's Name (type or print) Estill Drilling Lic. No. 2329
Address P.O. Box 683 City Brownfield State Texas Zip 79316
Signature W.A Buster Estill 08/29/01 Signature Jimmy Kennedy 08/29/01

TDLR FORM b001WWD *White - TDLR* *Yellow - Owner* *Pink - Driller/Pump Installer*

05 16

Attention Owner:
Confidentiality Privilege Notice on reverse side of owner's copy.

Texas Department of License and Regulation

Water Well Driller/Pump Installer Program
P.O. Box 12157 Austin, Texas 78711 (512)463-7880 FAX (512)463-8616
Toll free (800)803-9202
Email address: water.well@license.state.tx.us

This form must be completed and filed with the department and owner within 60 days upon completion of the well.

WELL REPORT

Name	Address	City	State	Zip
Dub Barrow	1009 F.M. 1585	Lubbock	Texas	79423

County	Physical Address	City	State	Zip
Lubbock/152	F.R. 1585	Lubbock	Texas	79423

Lat. 33/28/53 Long. 101/50/78 Grid # 23-34-1

3) Type of Work
☒ New Well ☐ Reconditioning ☐ Replacement ☐ Deepening

4) Proposed Use (check) ☐ Monitor ☐ Environmental Soil Boring ☒ Domestic ☐ Industrial ☐ Irrigation ☐ Injection ☐ Public Supply ☐ De-watering ☐ Testwell ☐ Rig Supply
If Public Supply well, were plans submitted? ☐ Yes ☐ No

5) N↑

6) Drilling Date
Started 08/28/01
Completed 08/28/01

Diameter of Hole

Dia.(in)	From (ft)	To (ft)
8 3/4	0	161

7) Drilling Method (check) ☐ Driven ☐ Air Rotary ☒ Mud Rotary ☐ Bored ☐ Air Hammer ☐ Cable Tool ☐ Jetted ☐ Other

From (ft)	To (ft)	Description and color of formation material
1	2	Top Soil
2	42	Sandy Clay
42	50	Sandstone
50	102	Sand and Sandstone
102	157	Sand and Gravel
157	161	Yellow Clay

(Use reverse side of Well Owner's copy, If necessary)

8) Borehole Completion ☐ Open Hole ☐ Straight Wall ☐ Under-reamed ☒ Gravel Packed ☐ Other
If Gravel Packed give the interval from 90 ft. to 160 ft.

Casing, Blank Pipe, and Well Screen Data

Dia. (in.)	New Or Used	Steel, Plastic, etc. Perf., Slotted, etc Screen Mfg., if commercial	Setting (ft) From To	Gage Casing Screen
5"	N	PVC	0-161	
5"	N	PVC Perf.	121-161	

9) Cementing Data
Cementing from 2 ft. to 22 ft. # of sacks used 7
80 ft. to 90 ft. # of sacks used 3
Method Used
Cementing By Jimmy Kennedy
Distance to septic system field or other concentrated contamination ____ft.
Method of verification of above distance

13) Plugged ☐ Well plugged within 48 hours

Casing left in well: From (ft)	To (ft)	Cement/Bentonite placed in well: From (ft)	To (ft)	Sacks used
N/A				

10) Surface Completion
☐ Specified Surface Slab Installed
☐ Specified Surface Sleeve Installed
☒ Pitless Adapter Used
☐ Approved Alternative Procedure Used

14) Type Pump
☐ Turbine ☐ Jet ☒ Submersible ☐ Cylinder
☐ Other
Depth to pump bowls, cylinder, jet etc., 155 ft.

11) Water Level
Static level 144 ft. below Date 08/28/01
Artesian Flow gpm. Date

15) Water Test
Typetest ☐ Pump ☒ Bailer ☐ Jetted ☐ Estimated
Yield: 15 gpm with — ft. drawdown after 1 hrs.

12) Packers Type Depth
N/A

16) Water Quality
Did you knowingly penetrate a strata which contain undesirable constituents.
☐ YES ☒ NO If yes, did you submit a REPORT OF UNDESIRABLE WATER
Type of water Depth of Strata
Was a chemical analysis made ☐ Yes ☒ No

Company or individual's Name (type or print) Estill Drilling Lic. No. 2329
Address P.O. Box 683 City Brownfield State Texas Zip 79316
Signature W. A Buster Estill 08/28/01 Signature Jimmy Kennedy 08/28/01

d original copy by certified return receipt requested ma TDLR, P.O. Box 12157, Austin, TX 78711

ATTENTION OWNER: *Confidentiality Privilege Notice on reverse side of Well Owner's copy (pink)*

State of Texas
WELL REPORT

water.well@license.state.tx.us

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
512-463-7880

1) OWNER Lynn Zickefoose (Name) ADDRESS P.O. Box 6824 (Street or RFD) Lubbock (City) TX (State) 79493 (Zip)

2) ADDRESS OF WELL'S LOCATION: County Lubbock 152 Lot 20 FM 1585 (Street, RFD or other) Lubbock (City) TX (State) 79423 (Zip) Lat. 33-28-73 Long. 101-50-99 Grid # 23-34-1

3) TYPE OF WORK (Check): ☑ New Well ☐ Deepening ☐ Reconditioning ☐ Plugging

(4) PROPOSED USE (Check): ☐ Monitor ☐ Environmental Soil Boring ☑ Domestic ☐ Industrial ☐ Irrigation ☐ Injection ☐ Public Supply ☐ De-watering ☐ Testwell
If Public Supply well, were plans submitted to the TNRCC? ☐ Yes ☐ No

5)

6) WELL LOG:
Date Drilling: Started 6-5 20 01 Completed 6-5 2001

DIAMETER OF HOLE

Dia. (in.)	From (ft.)	To (ft.)
8 3/4	Surface	170

7) DRILLING METHOD (Check): ☐ Driven ☐ Air Rotary ☑ Mud Rotary ☐ Bored ☐ Air Hammer ☐ Cable Tool ☐ Jetted ☐ Other

From (ft.)	To (ft.)	Description and color of formation material
1	2	Top Soil
2	39	Sandy Clay
39	98	Sand & Sandstone
98	146	Sand & Gravel
146	155	Brown Clay
155	164	Sand & Gravel
164	170	Brown Clay

(Use reverse side of Well Owner's copy, if necessary)

8) Borehole Completion (Check): ☐ Open Hole ☐ Straight Wall ☐ Underreamed ☑ Gravel Packed ☐ Other
If Gravel Packed give interval from 90 ft. to 170 ft.

CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casing Screen
5	N	PVC	0	170	
5	N	PVC Perf.	130	170	

9) CEMENTING DATA
Cemented from 2 ft. to 42 ft. No. of sacks used 14
80 ft. to 90 ft. No. of sacks used 3
Method used
Cemented by Jim Kennedy
Distance to septic system field lines or other concentrated contamination ____ ft.
Method of verification of above distance

13) ☐ Well plugged within 48 hours

Casing left in well: From (ft)	Casing left in well: To (ft)	Cement/bentonite placed in well: From (ft)	Cement/bentonite placed in well: To (ft)	Sacks used
		N/A		

10) SURFACE COMPLETION
☐ Specified Surface Slab Installed
☐ Specified Steel Sleeve Installed
☑ Pitless Adapter Used
☐ Approved Alternative Procedure Used

14) TYPE PUMP:
☐ Turbine ☐ Jet ☑ Submersible ☐ Cylinder
☐ Other
Depth to pump bowls, cylinder, jet, etc., 167 ft.

15) WELL TESTS:
Type test: ☐ Pump ☑ Bailer ☐ Jetted ☐ Estimated
Yield: 15 gpm with ____ ft. drawdown after 1 hrs.

11) WATER LEVEL:
Static level 125 ft. below land surface Date 6-5-01
Artesian flow ____ gpm Date

16) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable constituents?
☐ Yes ☑ No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? ____ Depth of strata ____
Was a chemical analysis made? ☐ Yes ☑ No

12) PACKERS:

Type	Depth

JUL 11 2001
COMMENT
RECEIVED
NOV 22 2004
TCEQ CENTRAL FILE ROOM

I certify that I drilled this well (or the well was drilled under my direct supervision) and that each and all of the statements herein are true and correct. I understand that failure to complete items 1 thru 16 will result in the log(s) being returned for completion and resubmittal. INV# 5559

COMPANY NAME Estill Drilling (Type or print) WELL DRILLER'S LICENSE NO. WI 2329

ADDRESS P.O. Box 683-Lubbock Hwy (Street or RFD) Brownfield (City) TX (State) 79316 (Zip)

(Signed) W.A Estill (Licensed Well Driller) 6-5-01 (Signed) Jim Kennedy (Registered Driller Apprentice)

Please attach electric log, chemical analysis, and other pertinent information, if available.

TDLR FORM 001WWD (4/98) White - TDLR Yellow - DRILLER Pink - WELL OWNER

05 18

Attention Owner: Confidentiality Privilege Notice on reverse side of owner's copy.

Texas Department of License and Regulation

Water Well Driller/Pump Installer Program
P.O. Box 12157 Austin, Texas 78711 (512)463-7880 FAX (512)463-8616
Toll free (800)803-9202
Email address: water.well@license.state.tx.us

This form must be completed and filed with the department and owner within 60 days upon completion of the well.

WELL REPORT

Name	Address	City	State	Zip
Lynn Zickefoose	P.O Box 6824	Lubbock	TX	79493

County	Physical Address	City	State	Zip
Lubbock 152	Lot 21 FM RD 1585	Lubbock	TX	79423

3) Type of Work
☑ New Well ☐ Reconditioning ☐ Replacement ☐ Deepening

Lat. 33 28 70 Long. 101 51 03 Grid # 23-34-1

4) Proposed Use (check) ☐ Monitor ☐ Environmental Soil Boring ☑ Domestic ☐ Industrial ☐ Irrigation ☐ Injection ☐ Public Supply ☐ De-watering ☐ Testwell ☐ Rig Supply
If Public Supply well, were plans submitted? ☐ Yes ☐ No

5) N↑

6) Drilling Date
Started 6 1 4 01
Completed 6 1 4 01

Diameter of Hole

Dia.(in)	From (ft)	To (ft)
8 3/4	0	170

7) Drilling Method (check) ☐ Driven ☐ Air Rotary ☑ Mud Rotary ☐ Bored ☐ Air Hammer ☐ Cable Tool ☐ Jetted ☐ Other

From (ft)	To (ft)	Description and color of formation material
1	2	Top Soil
2	35	Sandy Clay
35	70	Sand & Sandstone
70	90	Sandstone
90	100	Sand
100	147	Sand & Gravel
147	159	Brown Clay
159	167	Sand & Gravel
167	170	Brown Clay

(Use reverse side of Well Owner's copy, If necessary)

8) Borehole Completion ☐ Open Hole ☐ Straight Wall ☐ Under-reamed ☑ Gravel Packed ☐ Other
If Gravel Packed give the interval from 90 ft. to 170 ft.

Casing, Blank Pipe, and Well Screen Data

Dia. (in.)	New Or Used	Steel, Plastic, etc. Perf., Slotted, etc Screen Mfg., if commercial	Setting (ft) From	Setting (ft) To	Gage Casing Screen
5	N	PVC	0	170	
5	N	PVC Perf	130	170	

9) Cementing Data
Cementing from 2 ft. to 22 ft. # of sacks used 7
80 ft. to 90 ft. # of sacks used 3
Method Used FILE ID
Cementing By Jim Kennedy SEQ #
Distance to septic system field or other concentrated contamination ft.
Method of verification of above distance EWR DESC CO

10) Surface Completion JUL 1 1 2001 RECEIVED
☐ Specified Surface Slab Installed
☐ Specified Surface Sleeve Installed
☑ Pitless Adapter Used
☐ Approved Alternative Procedure Used

11) Water Level
Static level 125 ft. below Date NOV 6 2 4 2004 01
Artesian Flow gpm. Date / /

12) Packers Type Depth
TCEQ - CENTRAL FILE ROOM
N/A

13) Plugged ☐ Well plugged within 48 hours

Casing left in well: From (ft)	To (ft)	Cement/Bentonite placed in well: From (ft)	To (ft)	Sacks used
		N/A		

14) Type Pump
☐ Turbine ☐ Jet ☑ Submersible ☐ Cylinder ☐ Other
Depth to pump bowls, cylinder, jet etc., 167 ft.

15) Water Test
Typetest ☐ Pump ☑ Bailer ☐ Jetted ☐ Estimated
Yield: 15 gpm with — ft. drawdown after 1 hrs.

16) Water Quality
Did you knowingly penetrate a strata which contain undesirable constituents.
☐ YES ☑ NO If yes, did you submit a REPORT OF UNDESIRABLE WATER
Type of water Depth of Strata
Was a chemical analysis made ☐ Yes ☑ No

Company or individual's Name (type or print)	Estill Drilling INV# 6229	Lic. No. WI 2329
Address P.O Box 6083 - Lubbock Hwy	City Brownfield	State TX Zip 79316
Signature W.A Estell	6 1 4 01	Signature / /

TDLR FORM b001WWD *White - TDLR* *Yellow - Owner* *Pink - Driller/Pump Installer*

05 19

Attention Owner: Confidentiality Privilege Notice on reverse side of owner's copy.

Texas Department of License and Regulation

Water Well Driller/Pump Installer Program
P.O. Box 12157 Austin, Texas 78711 (512)463-7880 FAX (512)463-8616
Toll free (800)803-9202
Email address: water.well@license.state.tx.us

This form must be completed and filed with the department and owner within 60 days upon completion of the well.

WELL REPORT

Name	Address	City	State	Zip
Lynn Zickefoose	P.O. Box 6824	Lubbock	TX	79493

County	Physical Address	City	State	Zip
Lubbock 152	FM RD 1585 Lot 22	Lubbock	TX	79423

3) Type of Work
☑ New Well ☐ Reconditioning ☐ Replacement ☐ Deepening

Lat. 33 29 69 Long. 101 51 03 Grid # 23-39-1

4) Proposed Use (check) ☐ Monitor ☐ Environmental Soil Boring ☑ Domestic ☐ Industrial ☐ Irrigation ☐ Injection ☐ Public Supply ☐ De-watering ☐ Testwell ☐ Rig Supply
If Public Supply well, were plans submitted? ☐ Yes ☐ No

5) N↑ 6

6) Drilling Date
Started 6/1/01
Completed 6/1/01

Diameter of Hole

Dia.(in)	From (ft)	To (ft)
8 3/4	0	170

7) Drilling Method (check) ☐ Driven ☐ Air Rotary ☑ Mud Rotary ☐ Bored ☐ Air Hammer ☐ Cable Tool ☐ Jetted ☐ Other

From (ft)	To (ft)	Description and color of formation material
1	2	Top Soil
2	33	Sandy Clay
33	90	Sand & Sandstone
90	100	Sand
100	148	Sand & Gravel
148	160	Brown Clay
160	165	Sand & Gravel
165	170	Brown Clay

(Use reverse side of Well Owner's copy, If necessary)

8) Borehole Completion ☐ Open Hole ☐ Straight Wall ☐ Under-reamed ☑ Gravel Packed ☐ Other
If Gravel Packed give the interval from 90 ft. to 170 ft.

Casing, Blank Pipe, and Well Screen Data

Dia. (in.)	New Or Used	Steel, Plastic, etc. Perf., Slotted, etc Screen Mfg., if commercial	Setting (ft) From	Setting (ft) To	Gage Casing	Gage Screen
5	N	PVC Plain	0	170		
5	N	PVC Perf	130	170		

9) Cementing Data
Cementing from 2 ft. to 42 ft. # of sacks used 14
50 ft. to 90 ft. # of sacks used 3
Method Used FILE ID SEQ #
Cementing By Jim Kennedy
Distance to septic system field or other concentrated contamination ___ ft.
Method of verification of above distance EWR # DESC CO

10) Surface Completion
☐ Specified Surface Slab Installed
☐ Specified Surface Sleeve Installed
☑ Pitless Adapter Used
☐ Approved Alternative Procedure Used

11) Water Level
Static level 125 ft. below Date 6/1/01
Artesian Flow ___ gpm. Date

12) Packers

Type	Depth

13) Plugged ☐ Well plugged within 48 hours
Casing left in well: Cement/Bentonite placed in well:

From (ft)	To (ft)	From (ft)	To (ft)	Sacks used
		N/A		

14) Type Pump
☐ Turbine ☐ Jet ☑ Submersible ☐ Cylinder ☐ Other
Depth to pump bowls, cylinder, jet etc., 167 ft.

15) Water Test
Typetest ☐ Pump ☑ Bailer ☐ Jetted ☐ Estimated
Yield: 15 gpm with — ft. drawdown after 1 hrs.

16) Water Quality
Did you knowingly penetrate a strata which contain undesirable constituents.
☐ YES ☑ NO If yes, did you submit a REPORT OF UNDESIRABLE WATER
Type of water ___ Depth of Strata ___
Was a chemical analysis made ☐ Yes ☑ No

RECEIVED
JUL 1 1 2001
COMPLIANCE
NOV 22 2004
TCEQ - CENTRAL FILE ROOM

Company or individual's Name (type or print)	Lic. No.
Estill Drilling INV#6228	WI 2329

Address	City	State	Zip
P.O. Box 683 - Lubbock Hwy	Brownfield	TX	79316

Signature W.A Estill 6/1/01 Signature / /

TDLR FORM b001WWD *White - TDLR* *Yellow - Owner* *Pink - Driller/Pump Installer* 05 20

Attention Owner: Confidentiality Privilege Notice on reverse side of owner's copy.

Texas Department of License and Regulation

Water Well Driller/Pump Installer Program
P.O. Box 12157 Austin, Texas 78711 (512)463-7880 FAX (512)463-8616
Toll free (800)803-9202
Email address: water.well@license.state.tx.us

This form must be completed and filed with the department and owner within 60 days upon completion of the well.

WELL REPORT

Name	Address	City	State	Zip
Linn Ficklorse	P.O. Box 10824	Lubbock	Tx	79493

County	Physical Address	City	State	Zip
Lubbock 152	Lot 23 FM. RD 1585	Lubbock	Tx	79423

3) Type of Work
☑ New Well ☐ Reconditioning ☐ Replacement ☐ Deepening

Lat. 33 28 72 **Long.** 101 51 08 **Grid #** 23-34-1

4) Proposed Use (check) ☐ Monitor ☐ Environmental Soil Boring ☑ Domestic ☐ Industrial ☐ Irrigation ☐ Injection ☐ Public Supply ☐ De-watering ☐ Testwell ☐ Rig Supply
If Public Supply well, were plans submitted? ☐ Yes ☐ No

5) N↑

6) Drilling Date
Started 5/25/01
Completed 5/25/01

Diameter of Hole

Dia.(in)	From (ft)	To (ft)
8 3/4	0	170

7) Drilling Method (check) ☐ Driven ☐ Air Rotary ☑ Mud Rotary ☐ Bored ☐ Air Hammer ☐ Cable Tool ☐ Jetted ☐ Other

From (ft)	To (ft)	Description and color of formation material
1	2	Top Soil
2	35	Sandy Clay
35	95	Sand and Sandstone
95	149	Sand and gravel
149	160	Brown Clay
160	1616	Sand and gravel
1616	170	Brown Clay

8) Borehole Completion ☐ Open Hole ☐ Straight Wall ☐ Under-reamed ☑ Gravel Packed ☐ Other
If Gravel Packed give the interval from 90 ft. to 170 ft.

Casing, Blank Pipe, and Well Screen Data

Dia. (in.)	New Or Used	Steel, Plastic, etc. Perf., Slotted, etc Screen Mfg., if commercial	Setting (ft) From	Setting (ft) To	Gage Casing Screen
5	N	PVC Plain	0	170	
5	N	PVC Perf.	130	170	

(Use reverse side of Well Owner's copy, if necessary)

9) Cementing Data
Cementing from 2 ft. to 42 ft. # of sacks used 14
80 ft. to 90 ft. # of sacks used 3
Method Used
Cementing By Jim Kennedy
Distance to septic system field or other concentrated contamination ___ ft.
Method of verification of above distance

13) Plugged ☐ Well plugged within 48 hours
Casing left in well: Cement/Bentonite placed in well:

From (ft)	To (ft)	From (ft)	To (ft)	Sacks used
		N/A		

10) Surface Completion
☐ Specified Surface Slab Installed
☐ Specified Surface Sleeve Installed
☐ Pitless Adapter Used
☐ Approved Alternative Procedure Used

14) Type Pump
☐ Turbine ☐ Jet ☑ Submersible ☐ Cylinder
☐ Other
Depth to pump bowls, cylinder, jet etc., 167 ft.

15) Water Test
Typetest ☐ Pump ☑ Bailer ☐ Jetted ☐ Estimated
Yield: 15 gpm with — ft. drawdown after 1 hrs.

11) Water Level
Static level 125 ft. below Date 5/25/01
Artesian Flow gpm. Date

16) Water Quality
Did you knowingly penetrate a strata which contain undesirable constituents.
☐ YES ☑ NO If yes, did you submit a REPORT OF UNDESIRABLE WATER
Type of water Depth of Strata
Was a chemical analysis made ☐ Yes ☑ No

12) Packers

Type	Depth
N/A	

RECEIVED NOV 22 2004 TCEQ - CENTRAL FILE ROOM

Company or individual's Name (type or print)	Lic. No.
Estell Drilling 6227	WI 2329

Address	City	State	Zip
P.O. Box 683 - Lubbock Hwy	Brownfield	Tx	79316

Signature		Signature	
a/a Bunky Estell	5/25/01	Jim Kennedy	5/25/01

TDLR FORM b001WWD *White - TDLR* *Yellow - Owner* *Pink - Driller/Pump Installer*

05 21

Send original copy by certified mail to: TNRCC, P.O. Box 13087, Austin, TX 78711-3087

Please use black ink.

ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

State of Texas WELL REPORT

Texas Water Well Drillers Advisory Council
P.O. Box 13087
Austin, TX 78711-3087
512-239-0530

1) OWNER James Jackson (Name) ADDRESS 1272 Ave. Q. (Street or RFD) Lubbock (City) TX (State) 79423 (Zip)

2) ADDRESS OF WELL: County Lubbock (Street, RFD or other) (City) (State) (Zip) GRID # 23-3X-1

3) TYPE OF WORK (Check): [X] New Well [ ] Deepening [ ] Reconditioning [ ] Plugging

4) PROPOSED USE (Check): [ ] Monitor [ ] Environmental Soil Boring [X] Domestic [ ] Industrial [ ] Irrigation [ ] Injection [ ] Public Supply [ ] De-watering [ ] Testwell
If Public Supply well, were plans submitted to the TNRCC? [ ] Yes [ ] No

5)

6) WELL LOG:
Date Drilling: Started 5/7 19 96 Completed 5/8 19 96

DIAMETER OF HOLE

Dia. (in.)	From (ft.)	To (ft.)
8 1/2	Surface	196

7) DRILLING METHOD (Check): [ ] Driven [ ] Air Rotary [X] Mud Rotary [ ] Bored [ ] Air Hammer [ ] Cable Tool [ ] Jetted [ ] Other

N

From (ft.)	To (ft.)	Description and color of formation material
0	5	Topsoil
5	9	Caliche
9	32	Brown Clay
32	62	Sandstone
62	88	Sand w/Sandstone
88	102	Coarse Sand w/Sand
102	142	Coarse Sand w/Gravel
142	162	Coarse Sand w/Brown Clay
162	178	Coarse Sand
178	190	Yellow Clay w/Coarse Sand
190	195	Blue Clay w/ Coarse Sand
195	196	Blue Clay

(Use reverse side if necessary)

RECEIVED
JUL 23 1996
TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

8) Borehole Completion (Check): [ ] Open Hole [ ] Straight Wall [ ] Underreamed [X] Gravel Packed [ ] Other
If Gravel Packed give interval ... from 10 ft. to 196 ft.

CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casting Screen
5	N	PVC - PLAIN	+02	136	
5	N	PVC - Slotted	136	196	.035

9) CEMENTING DATA [Rule 338.44(1)]
Cemented from 0 ft. to 10 ft. No. of sacks used 6
ft. to ft. No. of sacks used
Method used
Cemented by
Distance to septic system field lines or other concentrated contamination ft.
Method of verification of above distance

10) SURFACE COMPLETION
[ ] Specified Surface Slab Installed [Rule 338.44(2)(A)]
[X] Specified Steel Sleeve Installed [Rule 338.44(3)(A)]
[ ] Pitless Adapter Used [Rule 338.44(3)(b)]
[ ] Approved Alternative Procedure Used [Rule 338.71]

11) WATER LEVEL:
Static level ft. below land surface Date
Artesian flow gpm. Date

12) PACKERS: Type Depth

13) TYPE PUMP:
[ ] Turbine [ ] Jet [ ] Submersible [ ] Cylinder
[ ] Other
Depth to pump bowls, cylinder, jet, etc., ft.

14) WELL TESTS:
Type test: [ ] Pump [ ] Bailer [ ] Jetted [ ] Estimated
Yield: gpm with ft. drawdown after hrs.

15) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable constituents?
[ ] Yes [X] No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? Depth of strata
Was a chemical analysis made? [ ] Yes [X] No

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 15 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME Shallowater Drilling (Type or print) WELL DRILLER'S LICENSE NO. 3301 W

ADDRESS 8104 19th Street (Street or RFD) Lubbock (City) TX (State) 79407 (Zip)

(Signed) Barry W Simms (Licensed Well Driller) (Signed) (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

TNRCC-0199 (Rev. 11-01-94) WELL OWNER'S COPY 05 22

Attention Owner: Confidentiality Privilege Notice on reverse side of owner's copy.

Texas Department of License and Regulation

Water Well Driller/Pump Installer Program
P.O. Box 12157 Austin, Texas 78711 (512)463-7880 FAX (512)463-8616
Toll free (800)803-9202
Email address: water.well@license.state.tx.us

This form must be completed and filed with the department and owner within 60 days upon completion of the well.

WELL REPORT

1) OWNER

Name	Address	City	State	Zip
Lynn Zickefoose	P.O. BOX 6824	Lubbock	Tx.	79493

2) WELL LOCATION

County	Physical Address	City	State	Zip
Lubbock	Lot 17 FM RD 1585	Lubbock	Tx.	

Lat. 33 | 28 | 62 Long. 101 | 50 | 97 Grid # 23-34-1

3) Type of Work
☑ New Well ☐ Deepening ☐ Reconditioning

4) Proposed Use (check) ☐ Monitor ☐ Environmental Soil Boring ☐ Domestic ☐ Industrial ☐ Irrigation ☐ Injection ☐ Public Supply ☐ De-watering ☐ Testwell
If Public Supply well, were plans submitted to the TNRCC? ☐ Yes ☐ No

5) N↑

6) Drilling Date
Started 5 | 18 | 01
Completed 5 | 18 | 01

Diameter of Hole

Dia.(in)	From (ft)	To (ft)
8 3/4	0	170

7) Drilling Method (check) ☐ Driven ☐ Air Rotary ☑ Mud Rotary ☐ Bored ☐ Air Hammer ☐ Cable Tool ☐ Jetted ☐ Other

From (ft)	To (ft)	Description and color of formation material
1	2	Top Soil
2	30	Sandy Clay
30	107	Sand & Sandstone
107	150	Sand & Gravel
150	156	Brown Clay
156	169	Sand & Gravel
169	170	Brown Clay

8) Borehole Completion ☐ Open Hole ☐ Straight Wall ☐ Under-reamed ☑ Gravel Packed ☐ Other
If Gravel Packed give the interval from 90 ft. to 170 ft.

Casing, Blank Pipe, and Well Screen Data

Dia. (in.)	New Or Used	Steel, Plastic, etc. Perf., Slotted, etc Screen Mfg., if commercial	Setting (ft) From	Setting (ft) To	Gage Casing Screen
5	N	PVC	0	170	
5	N	PVC Perf.	130	170	

FILE ID | SEQ # | DESC CD | EMP # | JUL 1 1 2001 | COMMENT | AG

(Use reverse side of Well Owner's copy, if necessary)

9) Cementing Data
Cementing from 2 ft. to 42 ft. # of sacks used 14
80 ft. to 90 ft. # of sacks used 3
Method Used
Cementing By Jim Kennedy
Distance to septic system field or other concentrated contamination ___ ft.
Method of verification of above distance

10) Surface Completion
☐ Specified Surface Slab Installed
☐ Specified Surface Sleeve Installed
☑ Pitless Adapter Used
☐ Approved Alternative Procedure Used

11) Water Level
Static level 125 ft. below Date 5 | 18 | 01
Artesian Flow ____ gpm. Date / /

12) Packers

Type	Depth
N/A	

13) Plugged ☐ Well plugged within 48 hours
Casing left in well: Cement/Bentonite placed in well:

From (ft)	To (ft)	From (ft)	To (ft)	Sacks used
		N/A		

14) Typepump
☐ Turbine ☐ Jet ☑ Submersible ☐ Cylinder
☐ Other
Depth to pump bowls, cylinder, jet etc., 167 ft.

15) Water Test
Typetest ☐ Pump ☑ Bailer ☐ Jetted ☐ Estimated
Yield: 15 gpm with — ft. drawdown after 1 hrs.

16) Water Quality
Did you knowingly penetrate and strata which contain undesirable constituents.
☐ YES ☐ NO If yes, did you submit a REPORT OF UNDESIRABLE WATER
Type of water Depth of Strata
Was a chemical analysis made ☐ Yes ☐ No

Company or individual's Name (type or print) Estill Drilling INV# 5553 WI2329

Address P.O Box 1683-Lubbock Hwy City Brownfield State Tx. Zip 79316

Signature A A Estill 5 | 18 | 01 Signature Jim Kennedy / /

Licensed Driller/Pump Installer Apprentice

TDLR FORM 001WWD *White - TDLR Yellow - Owner Pink - Driller/Pump Installer*

05 23

Attention Owner: Confidentiality Privilege Notice on reverse side of owner's copy.

Texas Department of License and Regulation

Water Well Driller/Pump Installer Program
P.O. Box 12157 Austin, Texas 78711 (512)463-7880 FAX (512)463-8616
Toll free (800)803-9202
Email address: water.well@license.state.tx.us

This form must be completed and filed with the department and owner within 60 days upon completion of the well.

WELL REPORT

Name	Address	City	State	Zip
Lynn Zickefoose	P.O. Box 6824	Lubbock	Texas	79493

County	Physical Address	City	State	Zip
Lubbock	F.R. 1585 ; Lot 56	Lubbock	TX.	79423

3) Type of Work
☑ New Well ☐ Reconditioning ☐ Replacement ☐ Deepening

Lat. 33 · 28 · 52 Long. 101 · 51 · 03 Grid # 23-34-1

4) Proposed Use (check) ☐ Monitor ☐ Environmental Soil Boring ☑ Domestic ☐ Industrial ☐ Irrigation ☐ Injection ☐ Public Supply ☐ De-watering ☐ Testwell ☐ Rig Supply
If Public Supply well, were plans submitted? ☐ Yes ☐ No

5) N↑

6) Drilling Date
Started 12/04/01
completed 12/04/01

Diameter of Hole

Dia.(in)	From (ft)	To (ft)
9 7/8	0	170

7) Drilling Method (check) ☐ Driven ☐ Air Rotary ☑ Mud Rotary ☐ Bored ☐ Air Hammer ☐ Cable Tool ☐ Jetted ☐ Other

From (ft)	To (ft)	Description and color of formation material
1	2	Top Soil
2	21	Sandy Clay
21	45	Sand & Sandstone
45	50	Sandstone
50	90	Sand & Sandstone
90	140	Sand & Gravel
140	145	Brown Clay
145	163	Sand & Gravel
163	170	Yellow Clay

(Use reverse side of Well Owner's copy, If necessary)

RECEIVED
TDLR MAIL ROOM
JAN 22 2002
RECEIPT #
AMOUNT

8) Borehole Completion ☐ Open Hole ☐ Straight Wall ☐ Under-reamed ☑ Gravel Packed ☐ Other
If Gravel Packed give the interval from 80 ft. to 170 ft.

Casing, Blank Pipe, and Well Screen Data

Dia. (in.)	New Or Used	Steel, Plastic, etc. Perf., Slotted, etc Screen Mfg., if commercial	Setting (ft) From	Setting (ft) To	Gage Casing	Gage Screen
6"	N	PVC	0	170		
6"	N	PVC Perf.	130	170		

9) Cementing Data
Cementing from 2 ft. to 22 ft. # of sacks used 7
70 ft. to 80 ft. # of sacks used 3
Method Used SH
Cementing By Jimmy Kennedy
Distance to septic system field or other concentrated contamination ___ ft.
Method of verification of above distance

10) Surface Completion
☐ Specified Surface Slab Installed
☑ Specified Surface Sleeve Installed
☑ Pitless Adapter Used
☐ Approved Alternative Procedure Used

11) Water Level
Static level 135 ft. below Date 12/04/01
Artesian Flow ___ gpm. Date ___

12) Packers

Type	Depth
N/A	

13) Plugged ☐ Well plugged within 48 hours
Casing left in well: Cement/Bentonite placed in well:

From (ft)	To (ft)	From (ft)	To (ft)	Sacks used
N/A				

14) Type Pump
☐ Turbine ☐ Jet ☑ Submersible ☐ Cylinder ☐ Other
Depth to pump bowls, cylinder, jet etc., 167 ft.

15) Water Test
Typetest ☐ Pump ☑ Bailer ☐ Jetted ☐ Estimated
Yield: 15 gpm with — ft. drawdown after 1 hrs.

16) Water Quality
Did you knowingly penetrate a strata which contain undesirable constituents.
☐ YES ☑ NO If yes, did you submit a REPORT OF UNDESIRABLE WATER
Type of water ___ Depth of Strata ___
Was a chemical analysis made ☐ Yes ☑ No

Company or individual's Name (type or print)	Estill Drilling	Lic. No.	WI 2329
Address	P.O. Box 683	City Brownfield	State TX Zip 79316
Signature	W.A Estill 12/04/01	Signature	Jimmy Kennedy 12/04/01

TDLR FORM b001WWD *White - TDLR* *Yellow - Owner* *Pink - Driller/Pump Installer*

05 24

Send original copy by certified mail to the Texas Water Development Board
P. O. Box 12386
Austin, Texas 78711

State of Texas

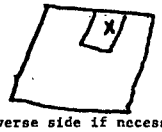
WATER WELL REPORT

For TWDB use only
Well No. 23-34-10
Located on map X-5
Received: 4-70
Rnd

1) OWNER:
Person having well drilled D.W. Bailey (Name) Address 3710-69th (Street or RFD) Lubbock (City) Tex (State)
Landowner Bailey Bailey Works (Name) Address 1 1 (Street or RFD) 1 1 (City) 1 1 (State)

2) LOCATION OF WELL:
County Lubbock, 7 miles in S (N.E., S.W., etc.) direction from Lubbock (Town)

Locate by sketch map showing landmarks, roads, creeks, hiway number, etc.*



(Use reverse side if necessary)

or

Give legal location with distances and directions from adjacent sections or survey lines.

Labor _____ League _____
Block E Survey GC&SF-RR.Co.
Abstract No. _____
~~(NW)~~ NE¼ ~~CW¼ OB¼~~ of Section 16

3) TYPE OF WORK (Check):
New Well ✓ Deepening
Reconditioning Plugging

4) PROPOSED USE (Check):
Domestic ✓ Industrial Municipal
Irrigation Test Well Other

5) TYPE OF WELL (Check):
Rotary ✓ Driven Dug
Cable Jetted Bored

6) WELL LOG:
Diameter of hole 11 in. Depth drilled 165 ft. Depth of completed well 165 ft. Date drilled 2-14-70
All measurements made from 0 ft. above ground level.

From (ft.)	To (ft.)	Description and color of formation material
0	16	Soil + caliche
16	45	Clay
45	52	Rock
52	79	Clay
79	86	Dry sand
86	90	Rock
90	134	Sandy clay
134	140	Sand + gravel
140	151	Sandy clay
151	156	Sand + gravel
156	165	Yellow + Blue clay

(Use reverse side if necessary)

9) Casing:
Type: ~~Old~~ New Steel ~~Plastic~~ ~~Other~~
Cemented from 0 ft. to 20 ft.
Diameter (inches) 6⅝ Setting From (ft.) 0 To (ft.) 165 Gage 1/188

10) SCREEN:
Type _____
Perforated ✓ Slotted
Diameter (inches) 6⅝ Setting From (ft.) 110 To (ft.) 156 Slot Size .040"x81"

7) COMPLETION (Check):
Straight wall Gravel packed ✓ Other
Under reamed Open Hole

8) WATER LEVEL:
Static level 130 ft. below land surface Date 2-14-70
Artesian pressure _____ lbs. per square inch Date _____
Depth to pump bowls, cylinder, jet, etc., _____ ft.
below land surface.

11) WELL TESTS:
Was a pump test made? Yes No ✓ If yes, by whom? _____
Yield: _____ gpm with _____ ft. drawdown after _____ hrs.
Bailer test 25 gpm with _____ ft. drawdown after _____ hrs.
Artesian flow _____ gpm
Temperature of water _____

12) WATER QUALITY:
Was a chemical analysis made? Yes No ✓
Did any strata contain undesirable water? Yes No ✓
Type of water? _____ depth of strata _____

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief.

NAME R M ~~ER~~ ARMSTRONG (Type or Print) Water Well Drillers Registration No. 483
ADDRESS Rt 5 (Street or RFD) Lubbock (City) Texas (State)
(Signed) R.M. Armstrong (Water Well Driller) _____ (Company Name)

Please attach electric log, chemical analysis, and other pertinent information, if available.

*Additional instructions on reverse side.

TWDBE-GW-53

05 25

(8)

Send original copy by certified mail to the *Texas Department of Water Resources* P. O. Box 13087 Austin, Texas 78711

State of Texas
WATER WELL REPORT
ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

Texas Water Well Drillers Board P. O. Box 13087 Austin, Texas 78711

1) OWNER Tyson Pump (Name) Address Rt 9 Box 233 (Street or RFD) Lubbock (City) TX (State) (Zip)

2) LOCATION OF WELL: County Lubbock 4 miles in S. (N.E., S.W., etc.) direction from Lubbock (Town)

Driller must complete the legal description in the right with distance and direction from two intersecting section or survey lines, or he must locate and identify the well on an official Quarter- or Half-Scale Texas County General Highway Map and attach the map to this form.

[ ] Legal description:
Section No. _____ Block No. _____ Township _____
Abstract No. _____ Survey Name _____
Distance and direction from two intersecting section or survey lines _____
[X] See attached map. Mapon 23-17-4X

3) TYPE OF WORK (Check): [X] New Well [ ] Deepening [ ] Reconditioning [ ] Plugging

4) PROPOSED USE (Check): [X] Domestic [ ] Industrial [ ] Public Supply [ ] Irrigation [ ] Test Well [ ] Other _____

5) DRILLING METHOD (Check): [X] Mud Rotary [ ] Air Hammer [ ] Driven [ ] Bored [ ] Air Rotary [ ] Cable Tool [ ] Jetted [ ] Other _____

6) WELL LOG:

DIAMETER OF HOLE

Dia. (in.)	From (ft.)	To (ft.)
	Surface	
8 3/4	–	160

Date drilled 2-19-85

7) BOREHOLE COMPLETION: [ ] Open Hole [ ] Straight Wall [ ] Underreamed [X] Gravel Packed [ ] Other _____
If Gravel Packed give interval ... from 10 ft. to 160 ft.

From (ft.)	To (ft.)	Description and color of formation material
0	6	Top Soil brown
6	36	Rock brown
36	130	Clay brown
130	140	Sand brown
140	155	Clay brown
155	160	Sand brown
160		Clay blue

8) CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mgf., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casing Screen
5	N	PLASTIC	0	160	1/8

CEMENTING DATA
Cemented from SURFACE ft. to 10 ft.
Method used 4 x 4 CONCRETE PAD
Cemented by _____ (Company or Individual)

9) WATER LEVEL:
Static level _____ ft. below land surface Date _____
Artesian flow _____ gpm. Date _____

10) PACKERS: Type Depth

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11) TYPE PUMP: [ ] Turbine [ ] Jet [ ] Submersible [ ] Cylinder [ ] Other _____
Depth to pump bowls, cylinder, jet, etc., _____ ft.

(Use reverse side if necessary)

13) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable water? [ ] Yes [X] No
If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? _____ Depth of strata _____
Was a chemical analysis made? [ ] Yes [X] No

12) WELL TESTS: [ ] Type Test: [ ] Pump [ ] Bailer [ ] Jetted [ ] Estimated
Yield: _____ gpm with _____ ft. drawdown after _____ hrs.

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief.

COMPANY NAME T & T DRILLING (Type or Print) Water Well Driller's License No. 1594

ADDRESS 4120 QUIRT (Street or RFD) LUBBOCK (City) TEXAS (State) 79404 (Zip)

(Signed) _____ (Licensed Water Well Driller) (Signed) _____ (Registered Driller Trainee)

For TDWR use only
Well No. 23-34-100
Located on map YES C.F.S.

Please attach electric log, chemical analysis, and other pertinent information, if available.

TDWR-0392 (Rev. 5-27-82) DEPARTMENT OF WATER RESOURCES COPY

05 26

2

Send original copy by certified mail to the Texas Department of Water Resources P. O. Box 13087 Austin, Texas 78711

State of Texas
WATER WELL REPORT

ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

Texas Water Well Drillers Board P. O. Box 13087 Austin, Texas 78711

1) OWNER Tyson Pump (Name) Address Rt 9 Box 233 (Street or RFD) Lubbock (City) Tx (State) (Zip)

2) LOCATION OF WELL: County Lubbock 4 miles in South (N.E., S.W., etc.) direction from Lubbock (Town)

Driller must complete the legal description to the right with distance and direction from two intersecting section or survey lines, or he must locate and identify the well on an official Quarter- or Half-Scale Texas County General Highway Map and attach the map to this form.

[ ] Legal description:
Section No. _____ Block No. _____ Township _____
Abstract No. _____ Survey Name _____
Distance and direction from two intersecting section or survey lines _____
[✓] See attached map. mapon 23-17-4X

3) TYPE OF WORK (Check): [✓] New Well [ ] Deepening [ ] Reconditioning [ ] Plugging

4) PROPOSED USE (Check): [✓] Domestic [ ] Industrial [ ] Public Supply [ ] Irrigation [ ] Test Well [ ] Other _____

5) DRILLING METHOD (Check): [✓] Mud Rotary [ ] Air Hammer [ ] Driven [ ] Bored [ ] Air Rotary [ ] Cable Tool [ ] Jetted [ ] Other _____

6) WELL LOG:

Date drilled 1-4-85

DIAMETER OF HOLE Dia. (in.)	From (ft.)	To (ft.)
	Surface	
8 3/4	–	145

From (ft.)	To (ft.)	Description and color of formation material
0	6	Top Soil brown
6	36	Rock brown
36	130	Clay brown
130	140	Sand brown
140	145	Clay blue

7) BOREHOLE COMPLETION: [ ] Open Hole [ ] Straight Wall [ ] Underreamed [✓] Gravel Packed [ ] Other _____
If Gravel Packed give interval . . . from 10 ft. to 145 ft.

8) CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mgf., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casing Screen
5	N	PLASTIC	0	145	1/8

CEMENTING DATA
Cemented from SURFACE ft. to 10 ft.
Method used 4 x 4 CONCRETE PAD
Cemented by _____ (Company or Individual)

9) WATER LEVEL:
Static level _____ ft. below land surface Date _____
Artesian flow _____ gpm. Date _____

10) PACKERS: Type Depth

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DEPT. OF WATER RESOURCES
(Use reverse side if necessary)

11) TYPE PUMP: [ ] Turbine [ ] Jet [ ] Submersible [ ] Cylinder [ ] Other _____
Depth to pump bowls, cylinder, jet, etc., _____ ft.

12) WELL TESTS: [ ] Type Test: [ ] Pump [ ] Bailer [ ] Jetted [ ] Estimated
Yield: _____ gpm with _____ ft. drawdown after _____ hrs.

13) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable water? [ ] Yes [✓] No
If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? _____ Depth of strata _____
Was a chemical analysis made? [ ] Yes [✓] No

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief.

COMPANY NAME T & T DRILLING (Type or Print) Water Well Driller's License No. 1594

ADDRESS 4120 QUIRT (Street or RFD) LUBBOCK (City) TEXAS (State) 79404 (Zip)

(Signed) _____ (Licensed Water Well Driller) (Signed) _____ (Registered Driller Trainee)

For TDWR use only
Well No. 23-34-100
Located on map yes C.F.S.

Please attach electric log, chemical analysis, and other pertinent information, if available.

TDWR-0392 (Rev. 5-27-82) DEPARTMENT OF WATER RESOURCES COPY

05 27

(1)

Send original copy by certified mail to the Texas Department of Water Resources P. O. Box 13087 Austin, Texas 78711

State of Texas
WATER WELL REPORT

ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

Texas Water Well Drillers Board P. O. Box 13087 Austin, Texas 78711

1) OWNER Tyson Pump (Name) Address Rt 9, Box 233 (Street or RFD) Lubbock (City) Tx (State) (Zip)

2) LOCATION OF WELL: County Lubbock 4 miles in South (N.E., S.W., etc.) direction from Lubbock (Town)

Driller must complete the legal description to the right with distance and direction from two intersecting section or survey lines, or he must locate and identify the well on an official Quarter- or Half-Scale Texas County General Highway Map and attach the map to this form.

Legal description:
Section No. _____ Block No. _____ Township _____
Abstract No. _____ Survey Name _____
Distance and direction from two intersecting section or survey lines _____
☑ See attached map. map on 23-17-4X

3) TYPE OF WORK (Check):
☑ New Well ☐ Deepening ☐ Reconditioning ☐ Plugging

4) PROPOSED USE (Check):
☑ Domestic ☐ Industrial ☐ Public Supply ☐ Irrigation ☐ Test Well ☐ Other _____

5) DRILLING METHOD (Check):
☑ Mud Rotary ☐ Air Hammer ☐ Driven ☐ Bored ☐ Air Rotary ☐ Cable Tool ☐ Jetted ☐ Other _____

6) WELL LOG:

Date drilled 1-8-85

DIAMETER OF HOLE

Dia. (in.)	From (ft.)	To (ft.)
8 3/4	Surface –	145

From (ft.)	To (ft.)	Description and color of formation material
0	6	Top Soil brown
6	36	Rock brown
36	130	Clay brown
130	140	Sand brown
140	145	Clay blue

7) BOREHOLE COMPLETION:
☐ Open Hole ☐ Straight Wall ☐ Underreamed
☑ Gravel Packed ☐ Other _____
If Gravel Packed give interval ... from 10 ft. to 145 ft.

8) CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mgf., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casing Screen
5	N	PLASTIC	0	145	1/8

CEMENTING DATA
Cemented from SURFACE ft. to 10 ft.
Method used 4 x 4 CONCRETE PAD
Cemented by _____ (Company or Individual)

9) WATER LEVEL:
Static level _____ ft. below land surface Date _____
Artesian flow _____ gpm. Date _____

10) PACKERS: Type Depth

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MAY - 6 1985
DEPT OF WATER RESOURCES

11) TYPE PUMP:
☐ Turbine ☐ Jet ☐ Submersible ☐ Cylinder ☐ Other _____
Depth to pump bowls, cylinder, jet, etc., _____ ft.

(Use reverse side if necessary)

13) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable water? ☐ Yes ☑ No
If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? _____ Depth of strata _____
Was a chemical analysis made? ☐ Yes ☑ No

12) WELL TESTS:
☐ Type Test: ☐ Pump ☐ Bailer ☐ Jetted ☐ Estimated
Yield: _____ gpm with _____ ft. drawdown after _____ hrs.

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief.

COMPANY NAME T & T DRILLING (Type or Print) Water Well Driller's License No. 1594

ADDRESS 4120 QUIRT (Street or RFD) LUBBOCK (City) TEXAS (State) 79404 (Zip)

(Signed) _____ (Licensed Water Well Driller) (Signed) _____ (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

For TDWR use only
Well No. 23-34-100
Located on map yesc. F.S.

TDWR-0392 (Rev. 5-27-82) DEPARTMENT OF WATER RESOURCES COPY

05 28

Please use black ink.
Send original copy by certified mail to the Texas Department of Water Resources P. O. Box 13087 Austin, Texas 78711

State of Texas
WATER WELL REPORT

ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

Texas Water Well Drillers Board
P. O. Box 13087
Austin, Texas 78711

1) OWNER Farm & Country Food Mart (Name) Address Box 5581 (Street or RFD) San Angelo (City) Tx (State) 76903 (Zip)

2) LOCATION OF WELL: County Lubbock 9 miles in S (N.E., S.W., etc.) direction from Lubbock (Town)

Driller must complete the legal description to the right with distance and direction from two intersecting section or survey lines, or he must locate and identify the well on an official Quarter- or Half-Scale Texas County General Highway Map and attach the map to this form.

☑ Legal description:
Section No. 12 Block No. E Township
Abstract No. Survey Name
Distance and direction from two intersecting section or survey lines 241 ft from Hiway 87 - 96 yds from North
☐ See attached map.

3) TYPE OF WORK (Check):
☑ New Well ☐ Deepening ☐ Reconditioning ☐ Plugging

4) PROPOSED USE (Check):
☐ Domestic ☑ Industrial ☐ Public Supply ☐ Irrigation ☐ Test Well ☐ Other

5) DRILLING METHOD (Check):
☑ Mud Rotary ☐ Air Hammer ☐ Driven ☐ Bored ☐ Air Rotary ☐ Cable Tool ☐ Jetted ☐ Other

6) WELL LOG:

Dia. (in.)	From (ft.)	To (ft.)
	Surface	
10	0	160

Date drilled Aug 29, 84

From (ft.)	To (ft.)	Description and color of formation material
0	3	Top Soil
3	12	Caliche
12	35	Clay
35	42	Rock
42	85	Clay
85	103	Sand & clay
103	115	Sand, Coarse
115	150	fine sand
150	160	Yellow Clay

7) BOREHOLE COMPLETION:
☐ Open Hole ☐ Straight Wall ☐ Underreamed
☑ Gravel Packed ☐ Other
If Gravel Packed give interval . . . from 10 ft. to 160 ft.

8) CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mgf., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casing	Gage Screen
6	N	PVC	0	160	160	PSI
		Slotted	120	160		8

9) CEMENTING DATA [Rule 319.44(b)]
Cemented from 0 ft. to 10 ft.
ft. to ft.
Method used Poured
Cemented by

10) SURFACE COMPLETION
☐ Specified Surface Slab Installed [Rule 319.44(c)]
☐ Pitless Adapter Used [Rule 319.44(d)]
☐ Approved Alternative Procedure Used [Rule 319.71]

11) WATER LEVEL:
Static level ft. below land surface Date
Artesian flow gpm. Date

12) PACKERS: Type Depth

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13) TYPE PUMP:
☐ Turbine ☐ Jet ☐ Submersible ☐ Cylinder
☐ Other
Depth to pump bowls, cylinder, jet, etc., ft.

(Use reverse side if necessary)

15) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable water? ☐ Yes ☐ No
If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? Depth of strata
Was a chemical analysis made? ☐ Yes ☐ No

14) WELL TESTS:
Type Test: ☐ Pump ☐ Bailer ☐ Jetted ☐ Estimated
Yield: gpm with ft. drawdown after hrs.

I here by certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 12 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME R. B. CARTER DRILLING CO. (Type or Print) Water Well Driller's License No. 56

ADDRESS 3432 55th STREET LUBBOCK, TEXAS 79413 (Street or RFD) (City) (State) (Zip)

(Signed) R B Carter (Licensed Water Well Driller) (Signed) Dyf (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

For TDWR use only
Well No. 23-34-1R
Located on map Yes DLF

05 29

DEPARTMENT OF WATER RESOURCES COPY

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IJ Dup

Send original copy by certified mail to the Texas Water Development Board P. O. Box 13087 Austin, Texas 78711

State of Texas

WATER WELL REPORT

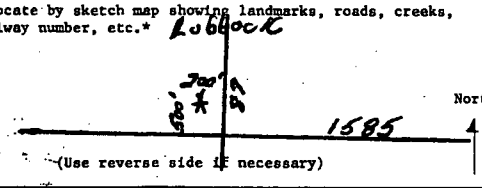
For TWDB use only
Well No. 23-34-1W
Located on map yes
Received: 73
all

1) OWNER:
Person having well drilled Jimmy Kubacak (Name) Address P.O. Box 2614 (Street or RFD) Lubbock (City) Texas (State)

Landowner SAME (Name) Address (Street or RFD) (City) (State)

2) LOCATION OF WELL:
County Lubbock, 5 miles in S (N.E., S.W., etc.) direction from Lubbock (Town)

Locate by sketch map showing landmarks, roads, creeks, hiway number, etc.* Lubbock



(Use reverse side if necessary)

or

Give legal location with distances and directions from adjacent sections or survey lines.

Labor _____ League _____

Block E Survey _____

Abstract No. _____

(NW¼ NE¼ SW¼ SE¼) of Section 14

3) TYPE OF WORK (Check): New Well, Deepening, Reconditioning, Plugging

4) PROPOSED USE (Check): Domestic, Industrial, Municipal, Irrigation, Test Well, Other

5) TYPE OF WELL (Check): Rotary, Driven, Dug, Cable, Jetted, Bored

6) WELL LOG:
Diameter of hole 10 in. Depth drilled 165 ft. Depth of completed well 165 ft. Date drilled 6-30-23

All measurements made from GL ft. above ground level.

From (ft.)	To (ft.)	Description and color of formation material
0	4	Soil
4	33	Caliche
33	56	Grey Rock
56	76	Sandy Clay
76	85	Brown Rock
85	94	Clay w/Rock
94	160	Gravel
160	165	Brownrock w/Clay

(Use reverse side if necessary)

9) Casing:
Type: Old, New, Steel, Plastic, Other

Cemented from _____ ft. to _____ ft.

Diameter (inches)	Setting From (ft.)	To (ft.)	Gage
5.300	+1	165	.250

10) SCREEN:
Type SAWED

Perforated, Slotted

Diameter (inches)	Setting From (ft.)	To (ft.)	Slot Size
5.300	135	165	1/16

7) COMPLETION (Check): Straight wall, Gravel packed, Other, Under reamed, Open Hole

8) WATER LEVEL:
Static level 120 ft. below land surface Date 6-30-23

Artesian pressure _____ lbs. per square inch Date _____

Depth to pump bowls, cylinder, jet, etc., 147 ft. below land surface.

11) WELL TESTS:
Was a pump test made? Yes No If yes, by whom?

Yield: _____ gpm with _____ ft. drawdown after _____ hrs.

Bailer test _____ gpm with _____ ft. drawdown after _____ hrs.

Artesian flow _____ gpm

Temperature of water _____

12) WATER QUALITY:
Was a chemical analysis made? Yes No

Did any strata contain undesirable water? Yes No

Type of water? Fresh depth of strata 46

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief.

NAME Wayne DeVaney (Type or Print) Water Well Drillers Registration No. 1486

ADDRESS P.O. Box 5155 (Street or RFD) Lubbock (City) Texas (State) 79417

(Signed) Wayne DeVaney (Water Well Driller) B-D Pump Service (Company Name)

Please attach electric log, chemical analysis, and other pertinent information, if available.

*Additional instructions on reverse side.

TWDBE-WD-6

05 30

REFERENCE 6

Lubbock Central Appraisal District

2010 Proposed Values

Home
General Information
News
FAQ
Forms
Searches
- QuickRef ID Search
- Owner Search
- Address Search

Property Data
- *Detail Sheet*
- Datasheet
- Bills

Other
- Taxing Units
- Neighborhoods
- Abstracts
- Subdivisions
- Taxpayer's Rights
- 2010 Property Tax Calei
- Protest and Appeal Proc
- Exemption Application P
- Credit Card Payments
- Low Income Housing
- Plat Maps
- 2010 Condition Table
- Exemption Table
- 2009 Tax Rates
- Employment

Property Detail Sheet (R162164)

History | Datasheet | Bills | Pay Taxes

Owner Information

Owner ID:	O0050609
Owner Name:	HUGHES, PAM
Owner Address:	13010 AVENUE L LUBBOCK,TX 79423-5934
Property Address:	13010 AVE L LUBBOCK, TX 79423

Parcel Information

Legal Description:	FAIRVIEW ACS BLK 14 NW 143.25 X 330
Neighborhood:	0605(0605 - City Of Lubbock)
Acreage:	
Cross Reference:	R273500-00014-00140-000
Undivided Interest:	
Exemption Codes:	
Entity Codes:	CLB (City Of Lubbock) GLB (Lubbock County) HSP (Lubb Cnty Hospital) SLB (Lubbock ISD) WHP (Hi Plains Water)
Deed Type:	Warranty Deed
Deed Book:	
Deed Page:	2006017682
Map Page:	486

Values Breakdown	2010 Preliminary Value
Land HS:	$0 +
Land NHS:	$3,815 +
Improvement HS:	$0 +
Improvement NHS:	$31,358 +
Ag Market:	$0
Ag Use:	$0 +
Timber Market:	$0
Timber Use:	$0 +
Assessed:	$35,173 =

Improvements

ID	Type	SPTB	Segs	Value
Imp1	C (Commercial)	F1 (F1 - Real Commercial)	1	$ 31,358

Land

ID	Type	SPTB	Acres	Market
Land1	C (Commercial)	F1 (F1 - Real Commercial)	1.090	$ 3,815

Get Adobe Reader * Adobe Acrobat Reader 5.0 (minimum) is required to view pdf documents. Acrobat Reader is a free program available here.

REFERENCE 7

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

TELEPHONE MEMO TO THE FILE

Please complete with typewriter or black pen.

Call to: Olen Johnson

Call from: Stephen Ellis

Date of call: 2/25/10

File no.: TXN000606862

Phone no.: (806) 786-8578

Subject: ownership history of CSMHP

Information for file: Mr. Johnson bought the property in the late 70s (he couldn't remember the year) when it was already being used as a mobile home park. It had one well on-site, he added a second well in 1983. He sold the property to Don Hughes in 2003. He stated that the condition of the property has suffered since his ownership. He stated that he did not know the property history before he purchased it, but he knew that a block of old farm land had been partitioned some time before and the CSMHP was part of that.

Signed Stephen Ellis

TCEQ-0225 (Rev. 06-30-03)

07 01

REFERENCE 8

Technical Factsheet on: o-DICHLOROBENZENE

List of Contaminants

As part of the Drinking Water and Health pages, this fact sheet is part of a larger publication:
National Primary Drinking Water Regulations

Drinking Water Standards

MCLG: 0.6 mg/L
MCL: 0.6 mg/L
HAL: 1 to 10 day: 9 mg/L; Longer-term: 9 mg/L

Health Effects Summary

Acute: EPA has no data on the acute toxicity of o-dichlorobenzene which is relevant to the drinking water context.

Drinking water levels which are considered "safe" for short-term exposures: For a 10-kg (22 lb.) child consuming 1 liter of water per day: upto a 7-year exposure to 9 mg/L.

Chronic: EPA has found o-dichlorobenzene to potentially cause damage to the nervous system, liver, kidneys and blood cells from long-term exposure at levels above the MCL.

Cancer: There is inadequate evidence to state whether or not o-dichlorobenzene has the potential to cause cancer from lifetime exposures in drinking water.

Usage Patterns

Production of o-dichlorobenzene has decreased since the 1970's: from 54.6 million lbs. in 1975 to an estimated 43 million lbs. in 1991. In 1987 it was estimated that industries consumed o-dichlorobenzene as follows: Organic synthesis (mainly for herbicides), 90%; toluene diisocyanate processing solvent, 5%; solvent and miscellaneous uses, 5%.

The greatest use of o-dichlorobenzene is as a chemical intermediate for making agricultural chemicals, primarily herbicides.

Other present and past uses include: solvent for waxes, gums, resins, wood preservatives, paints; insecticide for termites and borers; in making dyes; as a coolant, deodorizer, degreaser.

Release Patterns

1,2-Dichlorobenzene's use in manufacturing and solvents may be significant sources of discharges into water. Dichlorobenzenes also enter the water systems (raw and contaminated water) from the use of 1,2-DCB as a deodorant in industrial wastewater treatment. Chemical waste dump leachates and direct manufacturing effluents are reported to be the major source of pollution of the chlorobenzenes (including the dichlorobenzenes) to Lake Ontario. The major source of 1,2-dichlorobenzene emission to the atmosphere has been reported to be solvent applications which may emit 25% of annual production to the atmosphere.

From 1987 to 1993, according to EPA's Toxic Chemical Release Inventory, o-dichlorobenzene releases to land and water totalled over 240,000 lbs., of which nearly 172,000 lbs. was to land. These releases

were primarily from organic chemicals manufacturing industries which use it as an intermediate in herbicide production. The largest releases occurred in New Jersey.

Environmental Fate

If released to soil, 1,2-dichlorobenzene can be moderately to tightly adsorbed. Experimental Koc values of 280 to 320 were determined in silt loam soils containing less than 2 percent organic matter. In equilibrium batch studies, a relatively strong adsorption of 1,2-dichlorobenzene to collected aquifer material was observed. However, the detection of 1,2-dichlorobenzene in various groundwaters indicates that leaching can occur. Volatilization from soil surfaces may be an important transport mechanism. It is possible that 1,2-dichlorobenzene will be slowly biodegraded in soil under aerobic conditions. Chemical transformation by hydrolysis, oxidation or direct photolysis are not expected to occur in soil.

If released to water, adsorption to sediment will be a major environmental fate process based upon extensive monitoring data in the Great Lakes area and Koc values. Analysis of Lake Ontario sediment cores has indicated the presence and persistence of 1,2-dichlorobenzene since before 1940. 1,2-Dichlorobenzene is volatile from the water column with an estimated half-life of 4.4 hours from a model river one meter deep flowing 1 m/sec with a wind velocity of 3 m/sec at 20 deg C; adsorption to sediment will attenuate volatilization. It has been suggested that the three dichlorobenzene isomers may undergo slow biodegradation in natural water. The dichlorobenzenes are not expected to be biotransformed in anaerobic water conditions found in aquifers.

1,2-Dichlorobenzene is not expected to undergo significant hydrolysis in environmental waters. It is reported to be resistant towards oxidation by peroxy radicals in aquatic media. In an isooctane solvent, 1,2-dichlorobenzene absorbs virtually no radiation above 300 nm; therefore, direct photolysis in the environment should not be significant.

If released to air, 1,2-dichlorobenzene will exist predominantly in the vapor-phase and will react with photochemically produced hydroxyl radicals at an estimated half-life rate of 24 days in a typical atmosphere. Direct photolysis in the troposphere is not expected to be important. The detection of 1,2-dichlorobenzene in rainwater suggests that atmospheric removal via wash-out is possible.

In a study of a representative green alga, the log10 bioconcentration factors (BCF) for 1,2-dichlorobenzene was 4.17. Experimental BCF values of 66-560 have been reported and 1,2-dichlorobenzene has been detected in trout from Lake Ontario. General population exposure to 1,2-dichlorobenzene may occur through oral consumption of contaminated drinking water and food (particularly fish) and through inhalation of contaminated air since 1,2-dichlorobenzene has been detected in widespread ambient air.

Chemical/Physical Properties

CAS Number: 95-50-1

Color/ Form/Odor: Colorless liquid with pleasant, aromatic odor

M.P.: -17 C B.P.: 180.5 C

Vapor Pressure: 1.47 mm Hg at 25 C

Octanol/Water Partition (Kow): Log Kow = 3.38

Density/Spec. grav: 1.31 g/L at 20 C

Solubility: 0.14 g/L of water at 25 C; Slightly soluble in water

Soil sorption coefficient: Koc measured at 280 to 320 for loam soils; low to moderate mobility in soil

Odor/Taste Thresholds: N/A

Bioconcentration Factor: BCF measured at 270 to 560 in fish; expected to bioconcentrate in aquatic organisms.

Henry's Law Coefficient: 0.0012 atm-cu m/mole at 20 C

Trade Names/Synonyms: ortho Dichlorobenzol, Dilantin, Dowtherm E, Chloroben, Dilatin DB

Other Regulatory Information

Monitoring:

--For Ground/Surface Water Sources:

Initial Frequency- 4 quarterly samples every 3 years

Repeat Frequency- Annually after 1 year of no detection

--Triggers - Return to Initial Freq. if detect at > 0.0005 mg/L

Analysis

Reference Source	Method Numbers
EPA 600/4-88-039	502.2; 524.2

Treatment/Best Available Technologies: Granular Activated Charcoal and Packed Tower Aeration

Toxic Release Inventory - Releases to Water and Land, 1987 to 1993 (in pounds):

		Water	Land
TOTALS (in pounds)		**75,967**	**171,663**
Top Five States*			
NJ	19,602	165,661	
WV	39,653	0	
OR	7,260	0	
SC	1,502	4,628	
TX	1,418	1,000	
Major Industries			
Industrial Organics		15,416	98,092
Cyclic crudes, dyes		7,639	67,418
Alkalis, chlorine		38,029	0
Paper mills		7,260	0
Gum, wood chems.		250	4,378

* Water/Land totals only include facilities with releases greater than a certain amount - usually 1000 to 10,000 lbs.

For Additional Information

EPA can provide further regulatory or other general information:
EPA Safe Drinking Water Hotline - 800/426-4791

Other sources of toxicological and environmental fate data include:
Toxic Substance Control Act Information Line - 202/554-1404
Toxics Release Inventory, National Library of Medicine - 301/496-6531
Agency for Toxic Substances and Disease Registry - 404/639-6000

REFERENCE 9

1,2-DICHLOROBENZENE

CASRN: 95-50-1

For other data, click on the Table of Contents

Manufacturing/Use Information:

Major Uses:

For **1,2 Dichlorobenzene** (USEPA/OPP Pesticide Code: 059401) there are 0 labels match. /SRP: Not registered for current use in the U.S., but approved pesticide uses may change periodically and so federal, state and local authorities must be consulted for currently approved uses./
[National Pesticide Information Retrieval System's USEPA/OPP Chemical Ingredients Database on 1,2 Dichlorobenzene (95-50-1). Available from, as of February 6, 2008: http://ppis.ceris.purdue.edu/htbin/epachem.com] **PEER REVIEWED**

The active ingredient is no longer contained in any registered pesticide products ... "cancelled."
[USEPA/OPP; Status of Pesticides in Registration, Reregistration and Special Review p.249 (Spring, 1998) EPA 738-R-98-002] **PEER REVIEWED**

Solvent for waxes, gums, resins, tars, rubbers, oils, asphalts, insecticide for termites and locust borers
[O'Neil, M.J. (ed.). The Merck Index - An Encyclopedia of Chemicals, Drugs, and Biologicals. Whitehouse Station, NJ: Merck and Co., Inc., 2006.., p. 518] **PEER REVIEWED**

Removing sulfur from illuminating gas; as intermed in mfr of dyes; as heat transfer medium
[O'Neil, M.J. (ed.). The Merck Index - An Encyclopedia of Chemicals, Drugs, and Biologicals. Whitehouse Station, NJ: Merck and Co., Inc., 2006.., p. 518] **PEER REVIEWED**

As degreasing agent for metals, leather, wool; as ingredient of metal polishes
[O'Neil, M.J. (ed.). The Merck Index - An Encyclopedia of Chemicals, Drugs, and Biologicals. Whitehouse Station, NJ: Merck and Co., Inc., 2006.., p. 518] **PEER REVIEWED**

As degreasing agent for metals, leather, wool; as ingredient of metal polishes
[Lewis, R.J. Sr.; Hawley's Condensed Chemical Dictionary 14th Edition. John Wiley & Sons, Inc. New York, NY 2001., p. 359] **PEER REVIEWED**

Herbicide, insecticide, and soil fumigant /Former use/
[Farm Chemicals Handbook 1998. Willoughby, OH: Meister Publishing Co., 1998., p. C-289] **PEER REVIEWED**

As solvent mixt used to remove lead & carbonaceous deposits from engine parts; as component of rust-proofing mixt
[IARC. Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man. Geneva: World Health Organization, International Agency for Research on Cancer, 1972-PRESENT. (Multivolume work)., p. V7 234 (1974)] **PEER REVIEWED**

As a magnetic coil coolant, in wood-preserving compounds
[IARC. Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man. Geneva: World Health Organization, International Agency for Research on Cancer, 1972-PRESENT. (Multivolume work)., p. V7 234 (1974)] **PEER REVIEWED**

09 01

Chem intermed for making agric chem; emulsifiable form recommended for deodorizing garbage & sewage
[IARC. Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man. Geneva: World Health Organization, International Agency for Research on Cancer, 1972-PRESENT. (Multivolume work)., p. V7 235 (1974)] **PEER REVIEWED**

Org synthesis of pesticides & solvent in chemical processes
[SRI] **PEER REVIEWED**

Used as a process solvent in the manufacture of toluene diisocyanate.
[National Research Council. Drinking Water & Health. Volume 5. Washington, D.C.: National Academy Press, 1983., p. 22] **PEER REVIEWED**

Ortho-dichlorobenzene is used as a solvent in the following applications: motor-oil additive formulations; paints; formulations for removing paints; firearm cleaners; dissolution of pitch on papermaking felts; a carrier for wood preservatives and repellents; and upper cylinder lubricants
[IARC. Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man. Geneva: World Health Organization, International Agency for Research on Cancer, 1972-PRESENT. (Multivolume work)., p. V29 218 (1982)] **PEER REVIEWED**

Hydrolysis of **1,2-dichlorobenzene** with KOH and NaOH gives ortho-chlorophenol /an intermediate for dyestuffs and initiator for higher chlorinated phenols/
[Kirk-Othmer Encyclopedia of Chemical Technology. 3rd ed., Volumes 1-26. New York, NY: John Wiley and Sons, 1978-1984., p. 5(79) 865] **PEER REVIEWED**

Manufacture of 3,4-dichloroaniline.
[Lewis, R.J. Sr.; Hawley's Condensed Chemical Dictionary 14th Edition. John Wiley & Sons, Inc. New York, NY 2001., p. 359] **PEER REVIEWED**

CHEMICAL PROFILE: o-Dichlorobenzene: Uses: Miscellaneous solvent uses (paint removers, engine cleaners, and deinking solvents), 67%; toluene diisocyanate process solvents, 33%.
[Kirschner M; Chemical Market Reporter, April 5, 2004] **PEER REVIEWED**

Manufacturers:
PPG Industries, Inc., One PPG Place, Pittsburgh, PA 15272, (412) 434-3131; Chemicals Group; Production site: New Martinsville, Natrium, WV 26155
[SRI Consulting. 2007 Directory of Chemical Producers United States. Menlo Park, CA 2007, p. 548] **PEER REVIEWED**

CHEMICAL PROFILE: o-Dichlorobenzene: Producer: Solutia, Sauget, IL
[Kirschner M; Chemical Market Reporter, April 5, 2004] **PEER REVIEWED**

Methods of Manufacturing:
CHLORINATION OF BENZENE OR MONOCHLOROBENZENE IN THE PRESENCE OF A CATALYST
[SRI] **PEER REVIEWED**

... by Sandmeyer procedure from appropriate chloroaniline, and along with o- and p-dichlorobenzenes, by chlorination of chlorobenzene.
[O'Neil, M.J. (ed.). The Merck Index - An Encyclopedia of Chemicals, Drugs, and Biologicals. Whitehouse Station, NJ: Merck and Co., Inc., 2006.., p. 518] **PEER

09 02

REVIEWED**

Chlorobenzenes are prepared industrially by reaction of liquid benzene with gaseous chlorine in the presence of a catalyst at moderate temperature and atmospheric pressure. Hydrogen chloride is formed as a byproduct. Generally, mixtures of isomers and compounds with varying degrees of chlorination are obtained ... . /Chlorobenzenes/
[Ullmann's Encyclopedia of Industrial Chemistry. 6th ed.Vol 1: Federal Republic of Germany: Wiley-VCH Verlag GmbH & Co. 2003 to Present, p. V8 109 (2003)] **PEER REVIEWED**

General Manufacturing Information:
Separation of mixt containing m-, o-, and p-dichlorobenzenes by distillation and crystallization: Mueller, Wolz, French patent 1,374,863 (1964 to Bayer), CA 62, 493e (1965), corresponding to British patent 999,845.
[O'Neil, M.J. (ed.). The Merck Index - An Encyclopedia of Chemicals, Drugs, and Biologicals. Whitehouse Station, NJ: Merck and Co., Inc., 2006.., p. 518] **PEER REVIEWED**

Product discontinued by The Dow Chemical Company
[Farm Chemicals Handbook 87. Willoughby, Ohio: Meister Publishing Co., 1987., p. C 188] **PEER REVIEWED**

Formulations/Preparations:
... Avail in USA as technical grade typically containing 98.7% by wt of ortho-isomer & 1.3% of meta- & para-isomers combined. It has ... moisture content of 80 ppm. ... also avail in USA in grade which ... contains 83% of ortho-isomer, 17% of meta- & para-isomers ... an emulsifiable form of ... latter product can ... /be obtained/.
[IARC. Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man. Geneva: World Health Organization, International Agency for Research on Cancer, 1972-PRESENT. (Multivolume work)., p. V7 233 (1974)] **PEER REVIEWED**

High purity grade: 98.0% minimum active ingredient; technical grade: 80-90% active ingredient
[IARC. Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man. Geneva: World Health Organization, International Agency for Research on Cancer, 1972-PRESENT. (Multivolume work)., p. V29 214 (1982)] **PEER REVIEWED**

Technical-grade ortho-dichlorobenzene typically consists of 70-85% ortho-dichlorobenzene, <0.05% chlorobenzene and <0.5% trichlorobenzene, with the remainder as meta- and para-dichlorobenzene. Pure-grade ortho-dichlorobenzene consists of >99.8% ortho-dichlorobenzene, <0.05% chlorobenzene, <0.1% trichlorobenzene and <0.1% para-dichlorobenzene. ...Trade names for ortho-dichlorobenzene include Cloroben, **Dilatin DB** and **Dowtherm E.**
[IARC. Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man. Geneva: World Health Organization, International Agency for Research on Cancer, 1972-PRESENT. (Multivolume work)., p. V73 225 (1999)] **PEER REVIEWED**

Composition of technical grade product: 65-85% **1,2-dichlorobenzene,** <0.05 % chlorobenzene, <0.5 % trichlorobenzene, remainder 1,4- and 1,3-dichlorobenzene. Pure grade: >99.8% **1,2-dichlorobenzene,** <0.05% chlorobenzene, <0.1% trichlorobenzene, <0.1% 1,4-dichlorobenzene.
[Organization for Economic Cooperation and Development; Screening Information Data Set for 1,2-Dichlorobenzene, 95-50-1 p.12 (November 6-9, 2001). Available from, as of January 31, 2008: http://www.chem.unep.ch/irptc/sids/OECDSIDS/sidspub.html] **PEER REVIEWED**

09 03

Impurities:
1,4-dichlorobenzene /at/ 0.5-1% w/w.
[EPA/Office of Pollution Prevention and Toxics; High Production Volume (HPV) Challenge Program's Robust Summaries and Test Plans. Available from the Database Query page at: http://www.epa.gov/hpv/pubs/hpvrstp.htm on Chlorobenzenes as of February 28, 2008.] **PEER REVIEWED**

High purity grade: less than 0.2% 1,2,4-trichlorobenzene and less than 0.005% monochlorobenzene. Technical grade: less than 19.0% other dichlorobenzenes isomers, less than 1.0% trichlorobenzenes & less than 0.05% monochlorobenzene.
[IARC. Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man. Geneva: World Health Organization, International Agency for Research on Cancer, 1972-PRESENT. (Multivolume work)., p. V29 214 (1982)] **PEER REVIEWED**

Consumption Patterns:
53% for organic synthesis (chiefly for pesticides); 20% for solvent in toluene di-isocyanate process; 15% for misc solvent uses; 8% for dyestuffs mfr, 4% for misc uses (1973)
[SRI] **PEER REVIEWED**

Organic synthesis (mainly for production of 3,4-dichloroaniline), 70%; solvents for toluene diisocyanate production, 15%; miscellaneous solvent usage, 8%; dye manufacture 4%; and other application, 3% (1978)
[IARC. Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man. Geneva: World Health Organization, International Agency for Research on Cancer, 1972-PRESENT. (Multivolume work)., p. V29 217 (1982)] **PEER REVIEWED**

CHEMICAL PROFILE: o-Dichlorobenzene. Demand: 1995: 35 million lb; 1996: 35 million lb; 2000 /projected/: 36 million lb.
[Kavaler AR; Chemical Marketing Reporter Sept 9 (1996)] **PEER REVIEWED**

CHEMICAL PROFILE: o-Dichlorobenzene. Demand: 2002: 4 million pounds; 2003: 3 million pounds; 2007: 3 million pounds, projected
[Kirschner M; Chemical Market Reporter, April 5, 2004] **PEER REVIEWED**

U. S. Production:
(1972) 2.83X10+10 GRAMS
[SRI] **PEER REVIEWED**

(1975) 2.48X10+10 GRAMS
[SRI] **PEER REVIEWED**

6.4 to 40.9X10+9 g
[USITC (1977)] **PEER REVIEWED**

2.2X10+9 g
[USITC (1981)] **PEER REVIEWED**

(1979) 2.60X10+10 g
[IARC MONOGRAPHS 1972-PRESENT V29 p.217] **PEER REVIEWED**

09 04

Production volumes for non-confidential chemicals reported under the Inventory Update Rule.

Year	Production Range (pounds)
1986	>10 million - 50 million
1990	>50 million - 100 million
1994	>10 million - 50 million
1998	>50 million - 100 million
2002	>10 million - 50 million

[US EPA; Non-confidential Production Volume Information Submitted by Companies for Chemicals Under the 1986-2002 Inventory Update Rule (IUR). Benzene, 1,2-dichloro- (95-50-1). Available from, as of February 11, 2008: http://www.epa.gov/oppt/iur/tools/data/2002-vol.html] **PEER REVIEWED**

1,2-Dichlorobenzene is listed as a High Production Volume (HPV) chemical (65FR81686). Chemicals listed as HPV were produced in or imported into the U.S. in >1 million pounds in 1990 and/or 1994. The HPV list is based on the 1990 Inventory Update Rule. (IUR) (40 CFR part 710 subpart B; 51FR21438).
[EPA/Office of Pollution Prevention and Toxics; High Production Volume (HPV) Challenge Program. Available from the Database Query page at: http://www.epa.gov/hpv/pubs/general/opptsrch.htm on 1,2-Dichlorobenzene (95-50-1) as of February 11, 2008] **PEER REVIEWED**

CHEMICAL PROFILE: o-Dichlorobenzene. Capacity: 2004: 32 million pounds
[Kirschner M; Chemical Market Reporter, April 5, 2004] **PEER REVIEWED**

U. S. Imports:
(1972) 6.30X10+06 GRAMS
[SRI] **PEER REVIEWED**

(1975) 1.23X10+9 GRAMS (PRINCPL CUSTMS DISTS)
[SRI] **PEER REVIEWED**

CHEMICAL PROFILE: o-Dichlorobenzene. Imports: 2002: 700,000 pounds; 2003: 900,000 pounds
[Kirschner M; Chemical Market Reporter, April 5, 2004] **PEER REVIEWED**

U. S. Exports:
(1972) Estimated to be negligible
[SRI] **PEER REVIEWED**

CHEMICAL PROFILE: o-Dichlorobenzene. Exports: 2002: 19 million pounds; 2003: 18 million pounds
[Kirschner M; Chemical Market Reporter, April 5, 2004] **PEER REVIEWED**

09 05

REFERENCE 10

Water Quality Summary -

COUNTRY SQUIRE MHP 1

PUBLIC DRINKING WATER

PWS ID# 1520142 Region 2 LUBBOCK County

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY TCEQ

SOC5

LAB ID	**TCEQ ID**		**Collected:** 8/30/1995	**Lab:** X	**Data Entry:**		
Chemical		**µg/l**	**POE:** 001	**Well:**			
LAB ID 9806369	**TCEQ ID**		**Collected:** 4/30/1998	**Lab:** T	**Data Entry:** RBE	5/15/1998	
Chemical		**µg/l**	**POE:** 002	**Well:**			
LAB ID EP008152	**TCEQ ID**		**Collected:** 6/12/2000 MAP	**Lab:** T	**Data Entry:** FGA	7/10/2000	
Chemical		**µg/l**	**POE:** 002	**Well:**			
BROMACIL		0.32					
LAB ID EP011930	**TCEQ ID**		**Collected:** 9/27/2000 MAP	**Lab:** T	**Data Entry:** FGA	12/19/2000	
Chemical		**µg/l**	**POE:** 002	**Well:**			
BROMACIL		3.48					
LAB ID EP012492	**TCEQ ID**		**Collected:** 10/12/2000 DC	**Lab:** T	**Data Entry:** FGA	12/22/2000	
Chemical		**µg/l**	**POE:** 002	**Well:**			
		S-IM					
LAB ID EP013358	**TCEQ ID**		**Collected:** 10/30/2000 DC	**Lab:** T	**Data Entry:** FGA	12/27/2000	
Chemical		**µg/l**	**POE:** 002	**Well:**			
BROMACIL		3.45					
LAB ID EP111397	**TCEQ ID**		**Collected:** 7/23/2001 DC	**Lab:** T	**Data Entry:** FGA	1/9/2002	
Chemical		**µg/l**	**POE:** 002	**Well:**			
BROMACIL		3.08					
LAB ID EP209295	**TCEQ ID**		**Collected:** 5/23/2002 JSN	**Lab:** T	**Data Entry:** ACL	6/6/2002	
Chemical		**µg/l**	**POE:** 002	**Well:** G1520142B EP002			
BROMACIL		3.31					
LAB ID 0501303004	**TCEQ ID** 0527114		**Collected:** 1/18/2005 NW	**Lab:** L	**Data Entry:** EDR	4/13/2006	
Chemical		**µg/l**	**POE:** 002	**Well:**			

VOC

LAB ID	**TCEQ ID**		**Collected:** 8/30/1995	**Lab:** X	**Data Entry:**		
Chemical		**µg/l**	**POE:** 001	**Well:**			
LAB ID	**TCEQ ID**		**Collected:** 4/17/1996	**Lab:** X	**Data Entry:**		
Chemical		**µg/l**	**POE:** 001	**Well:**			
LAB ID	**TCEQ ID**		**Collected:** 12/17/1996	**Lab:** X	**Data Entry:**		
Chemical		**µg/l**	**POE:** 001	**Well:**			
LAB ID 9714576	**TCEQ ID**		**Collected:** 12/15/1997	**Lab:** X	**Data Entry:** RBE	1/6/1998	
Chemical		**µg/l**	**POE:** 001	**Well:**			

LAB ID	**TCEQ ID**		**Collected:** 8/30/1995	**Lab:** X	**Data Entry:**	
Chemical		**µg/l**	**POE:** 002	**Well:**		
LAB ID 69294	**TCEQ ID**		**Collected:** 4/17/1996	**Lab:** X	**Data Entry:**	
Chemical		**µg/l**	**POE:** 002	**Well:**		
LAB ID	**TCEQ ID**		**Collected:** 12/17/1996	**Lab:** X	**Data Entry:**	
Chemical		**µg/l**	**POE:** 002	**Well:**		
LAB ID 9714577	**TCEQ ID**		**Collected:** 12/15/1997	**Lab:** X	**Data Entry:** RBE	1/6/1998
Chemical		**µg/l**	**POE:** 002	**Well:**		
LAB ID 9806375	**TCEQ ID**		**Collected:** 4/30/1998	**Lab:** T	**Data Entry:** RBE	7/15/1998
Chemical		**µg/l**	**POE:** 002	**Well:**		
LAB ID 9907461	**TCEQ ID**		**Collected:** 6/10/1999 MAP	**Lab:** T	**Data Entry:** FGA	7/16/1999
Chemical		**µg/l**	**POE:** 002	**Well:**		
ACETONE		14				
LAB ID EP008151	**TCEQ ID**		**Collected:** 6/12/2000 MAP	**Lab:** T	**Data Entry:** FGA	7/5/2000
Chemical		**µg/l**	**POE:** 002	**Well:**		
ACETONE		10				
CHLOROFORM		0.6				
LAB ID EP011914	**TCEQ ID**		**Collected:** 9/27/2000 MAP	**Lab:** T	**Data Entry:** FGA	1/30/2001
Chemical		**µg/l**	**POE:** 002	**Well:**		
ACETONE		14				
LAB ID EP111392	**TCEQ ID**		**Collected:** 7/23/2001 DC	**Lab:** T	**Data Entry:** FGA	8/10/2001
Chemical		**µg/l**	**POE:** 002	**Well:**		
CHLOROFORM		0.8				
LAB ID EP118422	**TCEQ ID**		**Collected:** 12/5/2001 JSN	**Lab:** T	**Data Entry:** ACL	3/4/2002
Chemical		**µg/l**	**POE:** 002	**Well:**		
BROMOFORM		1.1				
LAB ID EP206113	**TCEQ ID**		**Collected:** 3/27/2002 DG	**Lab:** T	**Data Entry:** ACL	4/19/2002
Chemical		**µg/l**	**POE:** 002	**Well:**		
CHLOROFORM		0.6				
LAB ID EP212926	**TCEQ ID**		**Collected:** 8/8/2002 JSN	**Lab:** T	**Data Entry:** LEP	8/20/2002
Chemical		**µg/l**	**POE:** 002	**Well:**		
CHLOROFORM		1.1				
LAB ID 0501303005	**TCEQ ID** 0527115		**Collected:** 1/18/2005 NW	**Lab:** L	**Data Entry:** EDR	4/13/2006
Chemical		**µg/l**	**POE:** 002	**Well:**		
LAB ID 0709340003	**TCEQ ID** 0793611		**Collected:** 9/13/2007 GFI	**Lab:** L	**Data Entry:** EDR	9/27/2007
Chemical		**µg/l**	**POE:** 002	**Well:**		
1,2-Dichlorobenzene		1.38				
LAB ID 0709340004	**TCEQ ID** 0793611		**Collected:** 9/13/2007 GFI	**Lab:** L	**Data Entry:** EDR	9/27/2007
Chemical		**µg/l**	**POE:** 002	**Well:**		

LAB ID AA92151	**TCEQ ID** 0927281FB	**Collected:** 3/2/2009 GFI	**Lab:** T	**Data Entry:** EDR	3/18/2009
Chemical	**µg/l**	**POE:** 002	**Well:**		

LAB ID AA92152	**TCEQ ID** 0927281	**Collected:** 3/2/2009 GFI	**Lab:** T	**Data Entry:** EDR	3/10/2009
Chemical	**µg/l**	**POE:** 002	**Well:**		
1,2-Dichlorobenzene	0.9				
Bromoform	0.6				
LAB ID 0703312001	**TCEQ ID** 0793607	**Collected:** 3/8/2007 GFI	**Lab:** L	**Data Entry:** EDR	3/16/2007
Chemical	**µg/l**	**POE:** R	**Well:** G1520142B		
1,2-Dichlorobenzene	1.52				
LAB ID 0703312002	**TCEQ ID** 0793607	**Collected:** 3/8/2007 GFI	**Lab:** L	**Data Entry:** EDR	3/16/2007
Chemical	**µg/l**	**POE:** R	**Well:** G1520142B		

LAB ID 0709340001	**TCEQ ID** 0793610	**Collected:** 9/13/2007 GFI	**Lab:** L	**Data Entry:** EDR	9/27/2007
Chemical	**µg/l**	**POE:** R	**Well:** G1520142B		
1,2-Dichlorobenzene	1.45				
LAB ID 0709340002	**TCEQ ID** 0793610	**Collected:** 9/13/2007 GFI	**Lab:** L	**Data Entry:** EDR	9/27/2007
Chemical	**µg/l**	**POE:** R	**Well:** G1520142B		

Inorganic Results Summary

COUNTRY SQUIRE MHP 1
PWS # 1520142

PAMELA SUE HUGHES, OWNER
13010 AVENUE L
LUBBOCK TX 79423-593
REGION 2

TCEQ

Lab ID	RESULT		Error (±)	Entry Point		Date	Reject Code / Comments	Well
ALKALINITY, BICARBONATE		Cont. ID						
EP111404	455 mg/l	1928		002		7/23/2001		RCL0.68
ALKALINITY, CARBONATE		Cont. ID						
EP111404	0 mg/l	1929		002		7/23/2001		RCL0.68
ALKALINITY, PHENOLPHTALEIN		Cont. ID						
EP111404	0 mg/l	1931		002		7/23/2001		RCL0.68
ALKALINITY, TOTAL		Cont. ID						
EP111404	373 mg/l	1927		002		7/23/2001		RCL0.68
ALUMINUM		Cont. ID		MCL = 0.05	Secondary			
EP111412	0.506 mg/l **	1002		002		7/23/2001		
ANTIMONY, TOTAL		Cont. ID		MCL = 0.006				
EP111412	< 0.004 mg/l	1074		002		7/23/2001		
ARSENIC		Cont. ID		MCL = 0.01				
EP111412	0.0097 mg/l	1005		002		7/23/2001		
0501303003	0.0114 mg/L **	1005		002		1/18/2005	DA	
BARIUM		Cont. ID		MCL = 2				
EP111412	0.04 mg/l	1010		002		7/23/2001		
BERYLLUIM, TOTAL		Cont. ID		MCL = 0.004				
EP111412	< 0.002 mg/l	1075		002		7/23/2001		
CADMIUM		Cont. ID		MCL = 0.005				
EP111412	< 0.0035 mg/l	1015		002		7/23/2001		
CALCIUM		Cont. ID						
EP111412	64.3 mg/l	1016		002		7/23/2001		
CHLORIDE		Cont. ID		MCL = 300	Secondary			
EP111404	158 mg/l	1017		002		7/23/2001		RCL0.68
CHROMIUM		Cont. ID		MCL = 0.1				
EP111412	< 0.02 mg/l	1020		002		7/23/2001		
COMBINED URANIUM		Cont. ID		MCL = 30				
EP111417	21.8 ug/l	4006	1.4	002		7/23/2001		
COPPER		Cont. ID		MCL = 1	Secondary			
EP111412	< 0.02 mg/l	1022		002		7/23/2001		
Dil.Conduct(umhos/cm)		Cont. ID						
EP111404	1914	1926		002		7/23/2001		RCL0.68

Lab ID	RESULT	Error (±)	Entry Point		Date	Reject Code / Comments	Well
FLUORIDE		Cont. ID	MCL = 2	Secondary			
EP319630	< 0.1 mg/l	1025			11/24/2003	UNSAT/CANNOT ID/FLUORIDE	
0412245002	4.59 mg/L **	1025	001		12/7/2004	DA	
0601094002	4.77 mg/L **	1025	001		1/5/2006	DA	
EP111404	4.2 mg/l **	1025	002		7/23/2001		RCL0.68
EP206115	4.3 mg/l **	1025	002		3/27/2002	FLUORIDE ONLY	RCL2.2
0501303002	4.81 mg/L **	1025	002		1/18/2005	DA	
GROSS ALPHA PARTICLE ACTIVIT		Cont. ID	MCL = 15				
EP111417	31.4 pCi/l **	4109	5 002		7/23/2001		
GROSS BETA PARTICLE ACTIVITY		Cont. ID	MCL = 50				
EP111417	33.6 pCi/l	4100	4.8 002		7/23/2001		
HARDNESS, TOTAL (AS CaCO3)		Cont. ID					
EP111404	546 mg/l	1915	002		7/23/2001		RCL0.68
IRON		Cont. ID	MCL = 0.3	Secondary			
EP111412	0.495 mg/l **	1028	002		7/23/2001		
LEAD		Cont. ID					
EP111412	< 0.002 mg/l	1030	002		7/23/2001		
MAGNESIUM		Cont. ID					
EP111412	85 mg/l	1031	002		7/23/2001		
MANGANESE		Cont. ID	MCL = 0.05	Secondary			
EP111412	0.13 mg/l **	1032	002		7/23/2001		
MERCURY		Cont. ID	MCL = 0.002				
EP111412	< 0.0004 mg/l	1035	002		7/23/2001		
NICKEL		Cont. ID					
EP111412	< 0.02 mg/l	1036	002		7/23/2001		
NITRATE		Cont. ID	MCL = 10				
0412245001	11.5 mg/L **	1040	001		12/7/2004	DA	
0601094001	10.2 mg/L **	1040	001		1/5/2006	DA	
EP008155	11.17 mg/l **	1040	002		6/12/2000	TOTAL NITRATE	
EP111404	11.63 mg/l **	1040	002		7/23/2001		RCL0.68
EP206114	10.41 mg/l **	1040	002		3/27/2002	NITRATE	RCL2.2
EP209299	10.06 mg/l **	1040	002		5/23/2002	NITRATE	RCL0.72
EP212933	10.66 mg/l **	1040	002		8/8/2002	NITRATE	RCL1.87
EP218793	11.97 mg/l **	1040	002		12/3/2002	NITRATE	RCL1.71F
0501303001	< 0.05 mg/L	1040	002		1/18/2005	DA	
AA92061	10.5 mg/L **	1040	002		3/2/2009		
pH		Cont. ID					
EP111404	7.1	1925	002		7/23/2001		RCL0.68
RADIUM-226		Cont. ID					
EP111417	1.6 pCi/l	4020	0.2 002		7/23/2001		
RADIUM-228		Cont. ID					
EP111417	1.9 pCi/l	4030	0.5 002		7/23/2001		

Lab ID	RESULT	Error (±)	Entry Point	Date	Reject Code / Comments	Well
SELENIUM	Cont. ID		MCL = 0.05			
EP111412	0.013 mg/l	1045	002	7/23/2001		
SILVER	Cont. ID		MCL = 0.1	Secondary		
EP111412	< 0.03 mg/l	1050	002	7/23/2001		
SODIUM	Cont. ID					
EP111412	128 mg/l	1052	002	7/23/2001		
SULFATE	Cont. ID		MCL = 300	Secondary		
EP111404	181 mg/l	1055	002	7/23/2001		RCL0.68
THALLIUM, TOTAL	Cont. ID		MCL = 0.002			
EP111412	< 0.002 mg/l	1085	002	7/23/2001		
TOTAL DISSOLVED SOLIDS (TDS)	Cont. ID		MCL = 1000	Secondary		
EP111404	893 mg/l	1930	002	7/23/2001		RCL0.68
URANIUM-234	Cont. ID					
EP111417	9.6 pCi/l	4007	0.6 002	7/23/2001		
URANIUM-235	Cont. ID					
EP111417	0.6 pCi/l	4008	0.2 002	7/23/2001		
URANIUM-238	Cont. ID					
EP111417	7.2 pCi/l	4009	0.4 002	7/23/2001		
ZINC	Cont. ID		MCL = 5	Secondary		
EP111412	< 0.06 mg/l	1095	002	7/23/2001		

REFERENCE 11

PUBLIC WATER SUPPLY REGULATORY PROGRAM
WATER SYSTEM DATA

ID No. 1520142 Community x NTNC ___ Non-Comm ___

CCN No. ___ Superior ___ Approved ___ Status? ___ Region 02

Name of System COUNTRY SQUIRE MOBILE HOME PARK County LUBBOCK

Physical location 1 BLOCK W. OF INTERSECTION OF US 87 + FM 1585

Responsible Official OLAN L. JOHNSON Title OWNER Phone (806) 745-8578

Mailing Address R.T. 9 BOX 147 LUBBOCK, TX 79423

Chief Cert Op Name OLAN JOHNSON Grade & Type D WATER Phone (806) 745-8578

2nd Op Req'd? NO Other Cert Op Name - Grade & Type - Total # Cert Ops 1

WS Manager/Superintendent MR JOHNSON Other Officials Contacted -

Surveyed With MR JOHNSON Area Served COUNTRY SQUIRE MHP #1

Supplier and Source OLAN JOHNSON 2 WELLS.

Interconnection with another PWS? NO Name PWS I/C - Type I/C -

Retail Service Connections 18 Retail Meters - Retail Population 50

Wholesale Master Meters - Wholesale Service Connections - Wholesale Population -

Direct Charge (Y) N Dist. to and Name of Nearest PWS 2.5 Miles TO LUBBOCK PWS

Reason for this Survey (Routine, Follow Up, Initial, Enforcement, Complaint, Other) Previous Survey Date 5-1-91

Map Attached NO Previous Map OK? YES Well Operational Status Changed? NO

Description of Supply, Source, Treatment, and Chemicals Used WATER FOR COUNTRY SQUIRE MHP #1 IS PROVIDED BY TWO WELLS WHICH DISCHARGE INTO TWO 500 gal pressure tanks, then to the distribution system. CHLORINATION IS PROVIDED AHEAD OF THE PRESSURE TANKS.

Total Well Cap. 33 gpm .0475 mgd RW Cap - gpm - mgd

Treatment Cap. - gpm - mgd Total Svc. Pump Cap. 0 gpm - mgd

Total Elevated Storage 0 Total Storage Cap. - Pressure Tank Capacity 1000

Maximum Daily Usage - Date - Average Daily Usage - Time Period -

Wholesale Contract - Maximum Purchase Rate -

RECEIVED NOV 15 93 WATER UTILITIES SECTION

MICROBIOLOGICAL	Y	N		
Samples Submitted in Accordance with DWS?	☒	☐	Number of Samples Required 4/mo	# Submitted 1/mo
Raw Samples Submitted, if Required?	☒	☐	Number of Raw Samples 0	
Well(s) Surface Water Influenced?	☐	☒	Non-Comm. Dates of Operation -	Thru -
Acceptable Sample Siting Plan on File?	☒	☐		

CHEMICAL

Acceptable Quality? NO. Date, Last Chemical Analysis IOC 8/25/92 RC - VOC 5/8/92 SOC -

List UNACCEPTABLE Values FLUORIDE = 5.2 mg/L

HAS PROPER PUBLIC NOTIFICATION BEEN GIVEN? Yes. Date 9/93

Date of Survey 10/26/93 By Robert Winkler

Date of Approval 11/5/93 By Joe Bragg, P.E.

Letter Date, if different from Approval Date ___ Reply Requested NO Def. Score of this Survey 13

11 01

PUBLIC WATER SUPPLY REGULATORY PROGRAM

WATER SYSTEM DATA

ID No. 1520142 Community X NTNC ___ Non-Comm ___

CCN No. X0437 Superior Y/N Approved Y/N Probation Y/N Region 02

Name of System COUNTRY SQUIRE MHP #1 County Lubbock

Physical location 1 BLK WEST of INTERSECTION US 87 AND FM 1585

Responsible Official OLAN JOHNSON Title OWNER Phone (806) 745-8578

Mailing Address RT 9 BOX 147A Lubbock TX 79423

Chief Cert Op Name OLAN JOHNSON Grade & Type "D" WATER Phone (806) 745-8578

2nd Op Req'd? NO Other Cert Op Name BRUCE JOHNSON Grade & Type "D" Total # Cert Ops 2

WS Manager/~~Superintendent~~ OLAN JOHNSON Other Officials Contacted —

Surveyed With BRUCE JOHNSON Area Served COUNTRY SQUIRE MHP #1

Supplier and Source OLAN JOHNSON - 2 WELLS

Interconnection with another PWS? NO Name PWS I/C — Type I/C —

Retail Service Connections 19 Retail Meters — Retail Population 75

Wholesale Master Meters Ø Wholesale Service Connections Ø Wholesale Population Ø

Charge Y/N IN RENT Dist. to and Name of Nearest PWS 2 Miles - City of Lubbock

Reason for this Survey (Routine) Follow Up, Initial, Enforcement, Complaint, Other) Previous Survey Date 4/8/98

Map Attached NO Previous Map OK? YES Well Operational Status Changed? NO

Description of Supply, Source, Treatment, and Chemicals Used WATER IS SUPPLIED BY ONE WELL, WHICH DISCHARGES INTO 2 500 GALLON PRESSURE TANKS, THEN TO DISTRIBUTION. A SECOND WELL IS CURRENTLY AIRGAPPED. CHLORINATION IS PROVIDED AHEAD of STORAGE

Total Well Cap. 33 gpm 0.0475 mgd RW Cap — gpm — mgd

Treatment Cap. — gpm — mgd Total Svc. Pump Cap. — gpm — mgd

Total Elevated Storage — Total Storage Cap. — Pressure Tank Capacity 1000

Maximum Daily Usage — Date — Average Daily Usage 6,847 Gal Time Period 12 mon

Wholesale Contract — Maximum Purchase Rate —

MICROBIOLOGICAL	Y	N		
Samples Submitted in Accordance with DWS?	X	☐	Number of Samples Required 1/mon	# Submitted 12
Raw Samples Submitted, if Required?	~~X~~	~~☐~~	Number of Raw Samples —	
Well(s) Surface Water Influenced?	☐	X	Non-Comm. Dates of Operation —	
Acceptable Sample Siting Plan on File?	X	☐		

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SEP 22 1998
PUBLIC UTILITIES

CHEMICAL

Acceptable Quality? NO Date, Last Chemical Analysis IOC 4/30/98 NO/NO2 4/6/99 RC 4/30/98 VOC 12/15/97 SOC 4/30/98

List UNACCEPTABLE Values FLUORIDE 5.2 mg/L NITRATE 11.19 mg/L

HAS PROPER PUBLIC NOTIFICATION BEEN GIVEN? NO (SENT 4/9/99) Date NOV 1998 (4/9/99)

Date of Survey 4/6/99 By [signature]

Date of Approval 4/16/99 By [signature]

Letter Date, if different from Approval Date — Reply Requested NO Def. Score of this Survey 20

11 02

PUBLIC WATER SUPPLY REGULATORY PROGRAM

WATER SYSTEM DATA

ID No. 1520142 **Community** X **NTNC** _____ **Non-Comm** _____

CCN No. XO437 Superior * Approved * Probation * Region 02

Name of System Country Squire MHP #1 County Lubbock

Physical location 1 Blk West of intersection of US 87 and FM 1585

Responsible Official Mr. Olan Johnson Title owner Phone# (806) 745-8578

Mailing Address RT 9 Box 147A Lubbock, Tx 79423

Chief Cert Op Name Olan Johnson Grade & Type "D" grndwtr Phone (806) 745-8578

2nd Op Req'd? No Name Bruce Johnson Grade & Type "D" grndwtr Total # Cert. Ops. 2

WS Manager/Superintendent Olan Johnson Other Officials Contacted None

Surveyed With Olan Johnson Area Served MHP

Supplier and Source Self - 2 wells

Interconnection w/other PWS? No Name PWS I/C * Type I/C *

Retail Service Connections 19 Retail Meters * Retail Population 60

Wholesale Master Meters 0 Wholesale Service Connections 0 Wholesale Population 0

Charge ? no Dist. to and Name of Nearest PWS 2 miles - City of Lubbock

Reason for this Survey (Routine, Follow Up, Initial, Enforcement, Complaint, Other) Routine Previous Survey Date 4/6/99

Map Attached no Previous Map OK? yes Well Operational Status Changed? no

Description of Supply, Source, Treatment, and Chemicals Used:

Water is supplied by 1 well which discharges to two pressure tanks and then to the distribution system with chlorination provided ahead of storage. A second well is a demand well.

Total Well Cap. 40 gpm 0.0576 mgd RAW Cap. 0 gpm 0 mgd

Treatment Cap. 0 gpm 0 mgd Total Svc. Pump Cap. 0 gpm 0 mgd

Total Elevated Storage * Total Storage Cap. * Pressure Tank Cap. 1000

Maximum Daily Usage * Date * Average Daily Usage 5,078 gallons Time Period 12 months

Wholesale Contract * Maximum Purchase Rate *

MICROBIOLOGICAL

	Y	N
Samples Submitted per DWS?	X	
Raw Samples Submitted, if Required?	*	
Well(s) Surface Water Influenced?		X
Acceptable Sample Siting Plan on File? .106	X	

Number of Samples Required 12 # Submitted 12

Number of Raw Samples Required * # Submitted *

Non-Comm Dates of Operation * Thru *

CHEMICAL

Acceptable Quality? No Date, Last Analysis IOC 4/30/98 NO_2/NO_3 6/10/99 RC 4/30/98 VOC 6/10/99 SOC 4/30/98

List UNACCEPTABLE Values Fluoride 5.2 mg/l Nitrate 10.35 mg/l

HAS PROPER PUBLIC NOTIFICATION BEEN GIVEN? yes Date 1/15/2000

Date of Survey 3/3/2000 By Malcolm Laing

Date of Approval 3/6/2000 By

Letter Date, if different from Approval Date _____ Reply Requested No Def. Score of this Survey 20

*= Not Applicable
U=Unknown

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2000 MAR 30 P2:51

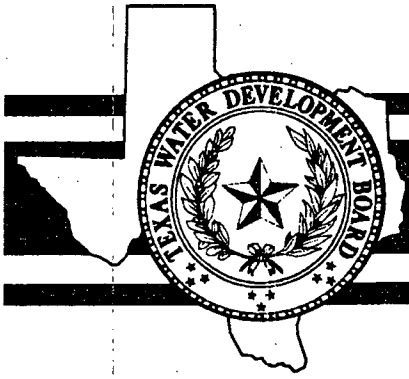
11 03

REFERENCE 12

Report 342

Water-Quality Evaluation of the Ogallala Aquifer, Texas

August 1993



Texas Water Development Board

Texas Water Development Board
Report 342

Water-Quality Evaluation of the Ogallala Aquifer, Texas

by
Janie Hopkins, Geologist

with the cooperation of:
High Plains Underground Water Conservation District No. 1
North Plains Water District
Panhandle Underground Water Conservation District No. 3
Sandy Land Underground Water Conservation District
Permian Basin Underground Water Conservation District

August 1993

ABSTRACT

More than 700 representative wells were sampled from 1989 to 1992 with the help of several cooperators throughout the Texas High Plains to assess water quality in the Ogallala aquifer. Cooperators included the High Plains Underground Water Conservation District No. 1, North Plains Water District, Panhandle Underground Water Conservation District No. 3, Sandy Land Underground Water Conservation District, and Permian Basin Underground Water Conservation District. This project fulfills one objective of the Hydrologic Monitoring Section of the Texas Water Development Board (TWDB): to collect and assess water-quality data in each of the nine designated major aquifers in Texas as part of a six-year routine monitoring cycle. Such assessment involves evaluation of recent water-quality data and comparison with previous data.

Certain measurements, including conductivity, pH, and temperature, were taken in the field during sampling. Sampling was conducted in accordance with the methods described in the TWDB *Field Manual for Ground-Water Sampling* (Nordstrom and Beynon, 1991). Samples were analyzed for major cations, anions, and nutrients; and for the first time on an aquifer-wide basis, tests were conducted to determine the presence of minor inorganic elements (metals), pesticides, and radionuclides.

Historically, the concentrations of dissolved solids, chloride, sulfate, and fluoride have exceeded primary Maximum Constituent Levels (MCLs) in numerous wells in the southern part of the study area. Maps illustrating the concentrations and locations, as well as tables listing averages and ranges of these constituents corroborate findings of earlier studies. The average dissolved-solids content of 1,132 milligrams per liter (mg/l) in the south, compared to 366 mg/l in the north, is indicative of the poorer water quality in the south. Twenty-eight percent of samples in the south contained chloride in excess of 300 mg/l, compared to less than one percent in the north; 33 percent of samples in the south contained sulfate in excess of 300 mg/l, compared to less than one percent in the north; and almost 40 percent of wells sampled in the south contained concentrations of fluoride in excess of 4.0 mg/l, compared to three percent in the north. Ogallala ground water is considered very hard, with total hardness, measured as $CaCO_3$, averaging 421 and 230 mg/l in the southern and northern parts of the study area, respectively.

Selenium was the one minor element found in any significant amount in Ogallala ground water. Although 41 percent of the samples in the southern wells contained selenium in excess of the former MCL of 10 micrograms per liter (µg/l), less than three percent contained concentrations in excess of the recently adopted MCL of 50 µg/l. Nitrate was the only nutrient of any concern; in the south, 15 percent of the samples contained nitrogen as nitrate in excess of the MCL of 44.3 mg/l compared to less than one percent in the north. Of the 18 organics detected in 11 wells in six southern counties, only three were in excess of their respective MCLs. The 28 wells with excessive radioactivity all contained excess alpha particles, three contained excess beta particles, and two contained excess combined radium.

The water-quality problems determined from this study have been well documented in previous reports published by the TWDB and others. In an effort to quantify the increase or decrease in water quality over time, major cation and anion data from the early '70s were compared with these same data from the recent sampling event. Data from analyses taken during the past 20 years appear to indicate a slight amelioration in water quality in the north compared to a somewhat more significant deterioration in water quality in the south during the same period.

Fluoride

Fluoride within the Ogallala is formed as naturally occurring volcanic-ash deposits or sands and gravels containing fluoride-rich minerals in the formation are leached (Gutentag and others, 1984). Although a certain amount of fluoride (of at least 0.8 mg/l, maximum benefits at 3.0 mg/l) sharply reduces the incidence of dental carries formation, long-term intake of fluoride in concentrations higher than 4 mg/l may cause mottling of the teeth and asymptomatic osteosclerosis (De Zuane, 1990). In the northern part of the study area, the average concentration was 1.6 mg/l; only 10 of 367 samples contained concentrations greater than 4.0 mg/l, and 99 contained between 2.0 and 4.0 mg/l. In the south, however, the average concentration was 3.5 mg/l; 112 of 281 samples contained concentrations greater than 4.0 mg/l, and 115 ranged between 2.0 and 4.0 mg/l. Fluoride concentrations greater than 4.0 mg/l are contoured in the map in Figure 6.

Other workers have discussed several reasons for these elevated concentrations of dissolved solids, chloride, sulfate, and fluoride. The primary argument is that vertical flow—from underlying Cretaceous aquifers in the south (Nativ, 1988), from the Dockum along the caprock escarpment in Deaf Smith, Floyd, Motley, Dickens, and Garza Counties (Nativ, 1988), and from Permian strata along the Caprock in Donley County (Knowles and others, 1984)—has allowed deeper, more highly mineralized waters to mix with Ogallala waters. Locally the water quality is affected by contamination from oil field brines and agricultural chemicals (including fertilizers), and by evaporation where the water table is very shallow.

Nativ (1988) supported her arguments for discharge from underlying aquifers citing physical and chemical evidence. The map in Figure 2 indicates areas where the potentiometric surface of the Cretaceous and the Triassic Dockum aquifers may exceed that in water of nearby wells completed in the Ogallala. As several have considered Cretaceous strata to be hydrologically part of the High Plains aquifer, which includes the Ogallala (Knowles and others, 1984), and assuming that permeable contacts or hydraulic connections exist between the Ogallala and underlying aquifers, upward flow is possible where the potentiometric head in the underlying aquifers is higher.

Isotopic compositions in ground waters of the Ogallala and underlying Cretaceous aquifers are not similar in the northern part of the High Plains, but are in the southern part; both the Ogallala and Cretaceous have high tritium values and are heavy with regard to $\delta^{18}O$ and δD in the southern part (Nativ, 1988). The trilinear diagrams of recent data in Figure 7 illustrate that Ogallala ground water is primarily a Ca-HCO_3 to mixed-cation-HCO_3 type in the north where dissolved solids concentrations are lower. In the south, however, where dissolved solids concentrations are higher, the dominant facies is a Ca-Mg-Na-HCO_3-Cl due to increased amounts of sodium and chloride. Figure 7 illustrates the similarity in composition of waters from Cretaceous and Ogallala aquifers in the southern part of the study area, supporting the assumption of a hydraulic connection between the two (Nativ, 1988).

Hardness as $CaCO_3$

An analytical term used frequently is hardness, a calculation based on dissolved alkali earth metals. Typically, this calculation is based on the total concentration of calcium and magnesium ions, and is reported as calcium carbonate. Other metallic ions such as iron, aluminum, manganese, barium, strontium, and zinc, however, may be present in such considerable amounts as to require inclusion in the hardness reporting quantity. The property of hardness is associated primarily with reactions of water and soap; as the hardness increases, so does the soap-consuming ability of the water. Hard water forms scale in boilers, water heaters, and pipes. Hardness in excess of 180 mg/l is considered to be very hard. For general domestic use, the hardness of water is not

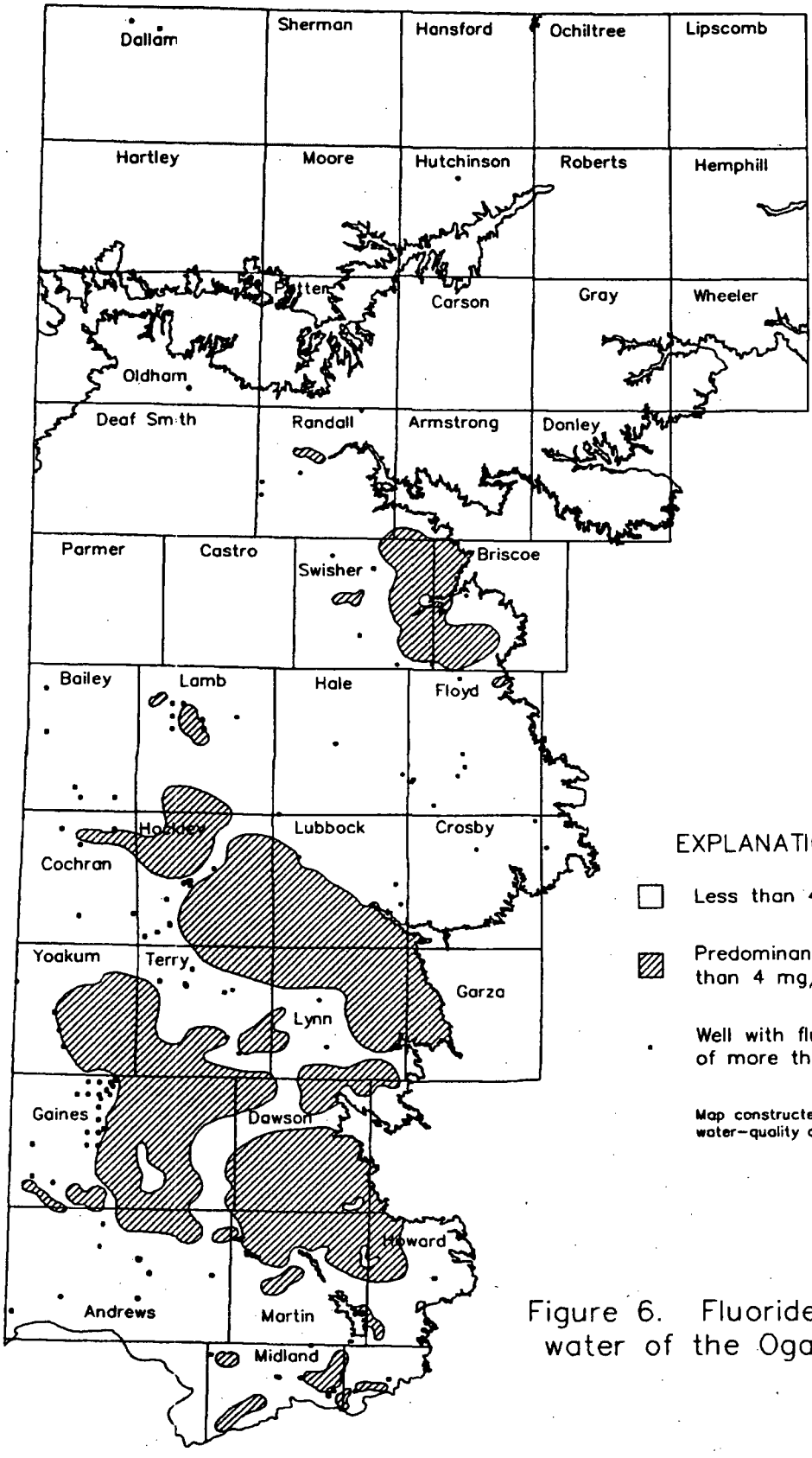


Figure 6. Fluoride content in water of the Ogallala aquifer.

Graphics by Steve Gifford

particularly objectionable until it exceeds 100 mg/l. Water softeners can be used to alleviate hard water and its associated problems. Ogallala ground water in both the northern and southern parts of the study area is very hard, averaging 230 and 421 mg/l $CaCO_3$, respectively.

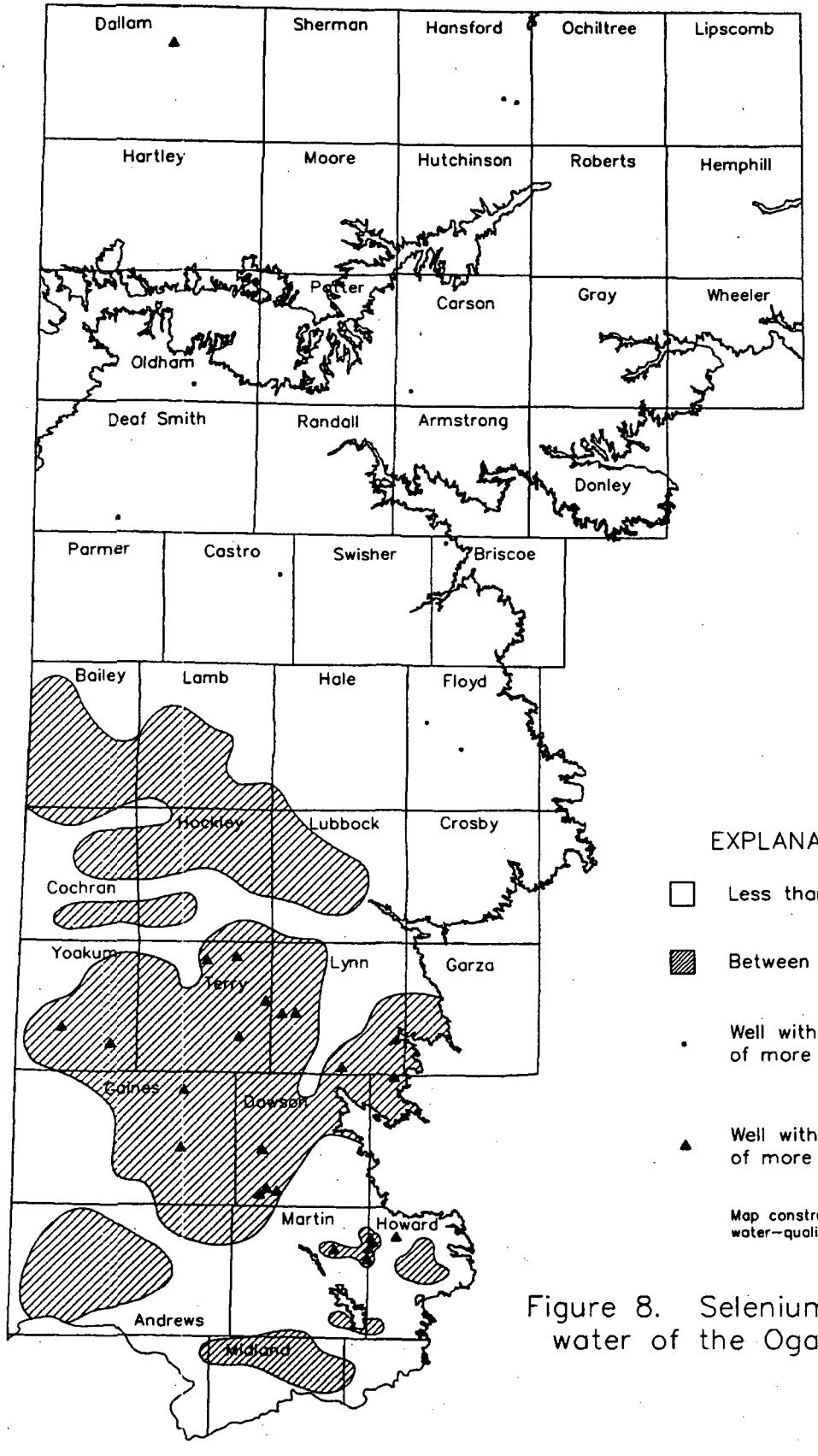
Table 6 lists the remaining constituents or minor inorganics in samples collected from 1989 to 1992. The majority of these were below detection limits, therefore no average values were calculated. Greater ranges and some samples exceeding their respective MCLs were found in the south: three samples of arsenic, one sample each of chromium and iron, eight of manganese, and 11 of selenium.

Selenium

Selenium within the Ogallala also occurs naturally and is considered nutritionally essential at low levels. It is expected to be found in ground water in areas where soils or formations are rich in selenium; elsewhere, it appears only in public sewers due to industrial pollution in trace quantities (De Zuane, 1990). The EPA recently raised the primary MCL for selenium from ten to 50 µg/l. As illustrated on the map in Figure 8, the average concentration of selenium is higher in the south (15.9 µg/l) than in the north (3.8 µg/l). In the south, 118 of 288 samples had concentrations greater than ten µg/l, 18 of which were greater than 50 µg/l; in the north, only nine samples of 344 total had concentrations of selenium greater than 10 µg/l, of which only one was greater than 50 µg/l.

Table 6. Dissolved trace metal constituents in ground water of the Ogallala aquifer.

Parameter	% Above Detection North	Range North	% Above Detection South	Range South
Arsenic (µg/l)	2	<10 - 15	45	<10 - 79
Barium (µg/l)	99	<20 - 1290	95	<20 - 223
Boron (µg/l)	100	20 - 730	100	120 - 2520
Cadmium (µg/l)	0	<10	0	<10
Chromium (µg/l)	0	<20	2	<20 - 134
Copper (µg/l)	1	<20 - 29	8	<20 - 81
Iron (µg/l)	0	<20	46	<20 - 358
Antimony (µg/l)	0	<50	0	<50
Manganese (µg/l)	0	<20	6	<20 - 802
Molybdenum (µg/l)	1	<20 - 34	16	<20 - 269
Silver (µg/l)	0	<10	0	<10
Vanadium (µg/l)	33	<20 - 38	91	<20 - 532
Zinc (µg/l)	41	<20 - 462	38	<20 - 1070
Aluminum (µg/l)	0	<50	0	<50
Selenium (µg/l)	50	<2 - 72	92	<2 - 167
Iodide (mg/l)	82	<.1 - .93	42	<.1 - 2.4
Bromide (mg/l)	42	<.1 - 3	71	<.1 - 17.2
Mercury (µg/l)	1	<.2 - 1.1	2	<.2 - 0.7



EXPLANATION

- Less than 10 mg/l selenium
- Between 10 and 50 mg/l selenium
- Well with selenium concentration of more than 10 mg/l
- Well with selenium concentration of more than 50 mg/l

Map constructed from all available water-quality data.

Figure 8. Selenium content in water of the Ogallala aquifer.

Graphics by Steve Gifford

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NUTRIENTS

Five nutrients were analyzed in each well: nitrate, nitrite, Kjeldahl, ammonia, and orthophosphate. Of these, only nitrate and nitrite have drinking water standards. Table 7 lists the percentages of wells with ranges of all samples or concentrations above detection limit and their ranges.

Table 7. Dissolved nutrients in ground water of the Ogallala aquifer.

Parameter	% Above Detection North	Range North	% Above Detection South	Range South
Ammonia (mg/l)	34	<.02 - 3.09	47	< .02 - 1
Nitrate (mg/l)	1	<.01 - .04	11	<.01 - 1
Nitrite (mg/l)	99	<.5 - 53.3	100	.5 - 335
Kjeldahl (mg/l)	93	<.1 - 9.7	71	<.1 - 1
Orthophosphate (mg/l)	42	<.01 - 0.4	80	<.01 - 1

Because of the heavy agricultural usage of the land in the study area, nitrate may be among the potential pollutants found in the region. Nitrate (NO_3) is a derivative of nitric acid and is one of the most important nutrient species. It is an end product of the aerobic stabilization of nitrogen, particularly organic nitrogen. Nitrate is used extensively as a fertilizer, as a food preservative, and as an oxidizing agent in the chemical industry. Nitrates are particularly detectable in soil and, therefore, ground water (De Zuane, 1990). Higher concentrations of nitrate in ground water should be expected where fertilizers are used, in decayed animal and vegetable matter, in leachates from sludge and refuse disposal, and in industrial discharges. The nitrate concentration of natural waters is typically higher than the nitrite concentration, as nitrites are oxidized to nitrates in these environments.

Of 366 samples analyzed for nitrate in the northern part of the Texas High Plains, only two contained nitrogen in excess of the MCL (44.3 mg/l as NO_3); the average was 9.8 mg/l. In the southern part, about 20 percent (56 of 283) exceeded the MCL; the average was 31.8 mg/l. The map in Figure 9, constructed as were the maps of dissolved constituents, illustrates the locations of these wells. Reeves and Miller (1978) and Nativ (1988) suggest that the Ogallala is more susceptible to surface contamination from the leaching of nitrogen-based fertilizers in areas where sandy soils are intensively cultivated and the ground-water table is shallow. Well depths (and water levels) are generally shallower in the south. Twenty-two percent of the wells sampled in the south had water level depths of less than 100 feet and 49 percent at less than 200 feet, compared to 11 percent at depths less than 100 and 15 percent less than 200 feet in the north.

Nitrite (NO_2) is a derivative of nitrous acid. It is formed by the action of bacteria upon ammonia and organic nitrogen. Nitrite is used in industry as a food preservative (sodium and potassium salts), particularly in meat and cheese. Nitrite, when detected in potable water in considerable amounts, is an indication of sewage/bacterial contamination and inadequate disinfection (De Zuane, 1990). In such reducing environments, nitrites are not oxidized to nitrates. Large concentrations of nitrite in water may result in the potential formation of carcinogenic nitrosamines in the bloodstream. Of the total 584 nitrite analyses from wells in the north and south, only two were at the MCL of 1 mg/l; the average concentration was 0.01 mg/l in the north and 0.01 mg/l in the south.

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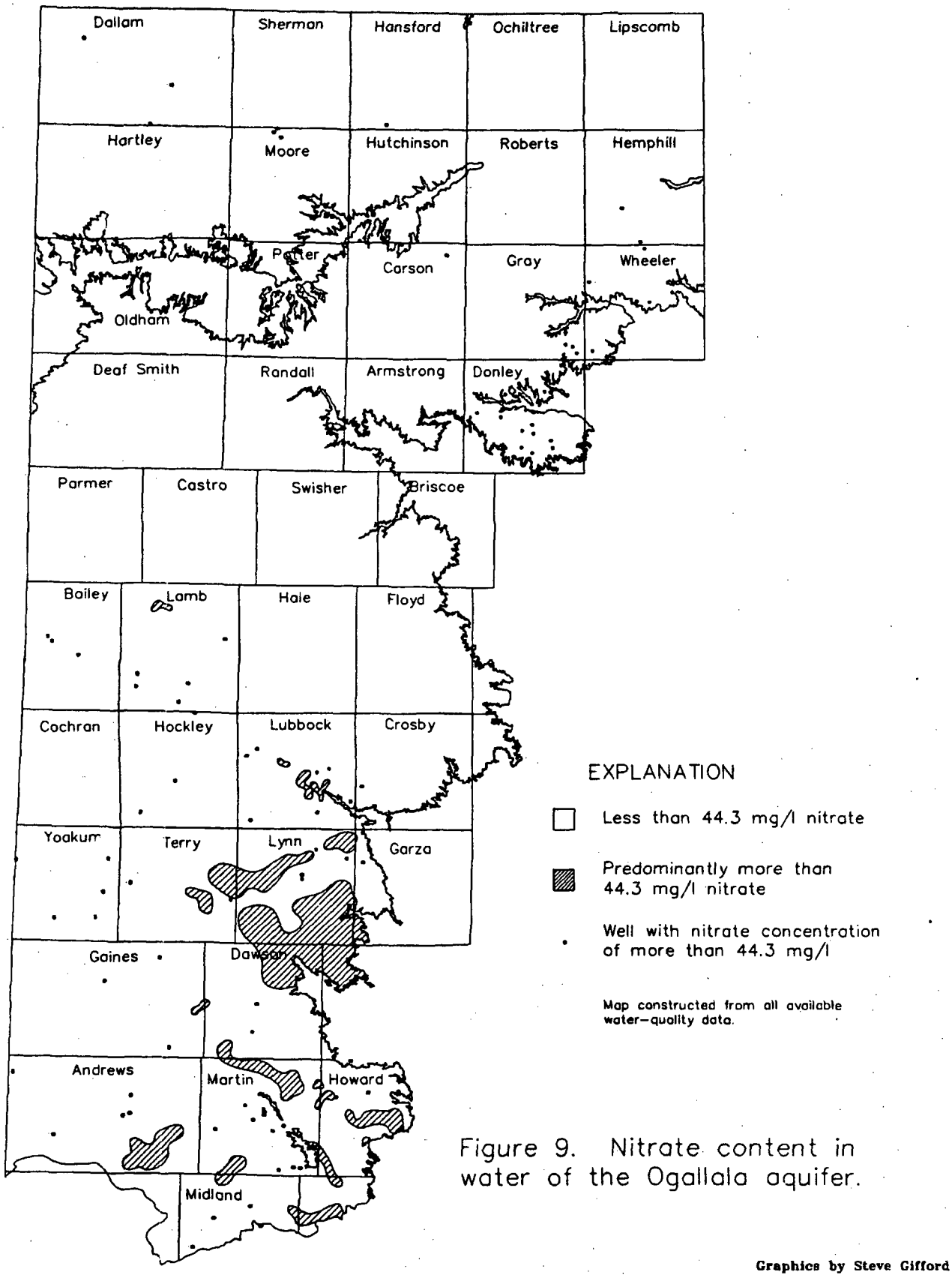

Figure 9. Nitrate content in water of the Ogallala aquifer.

Graphics by Steve Gifford

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